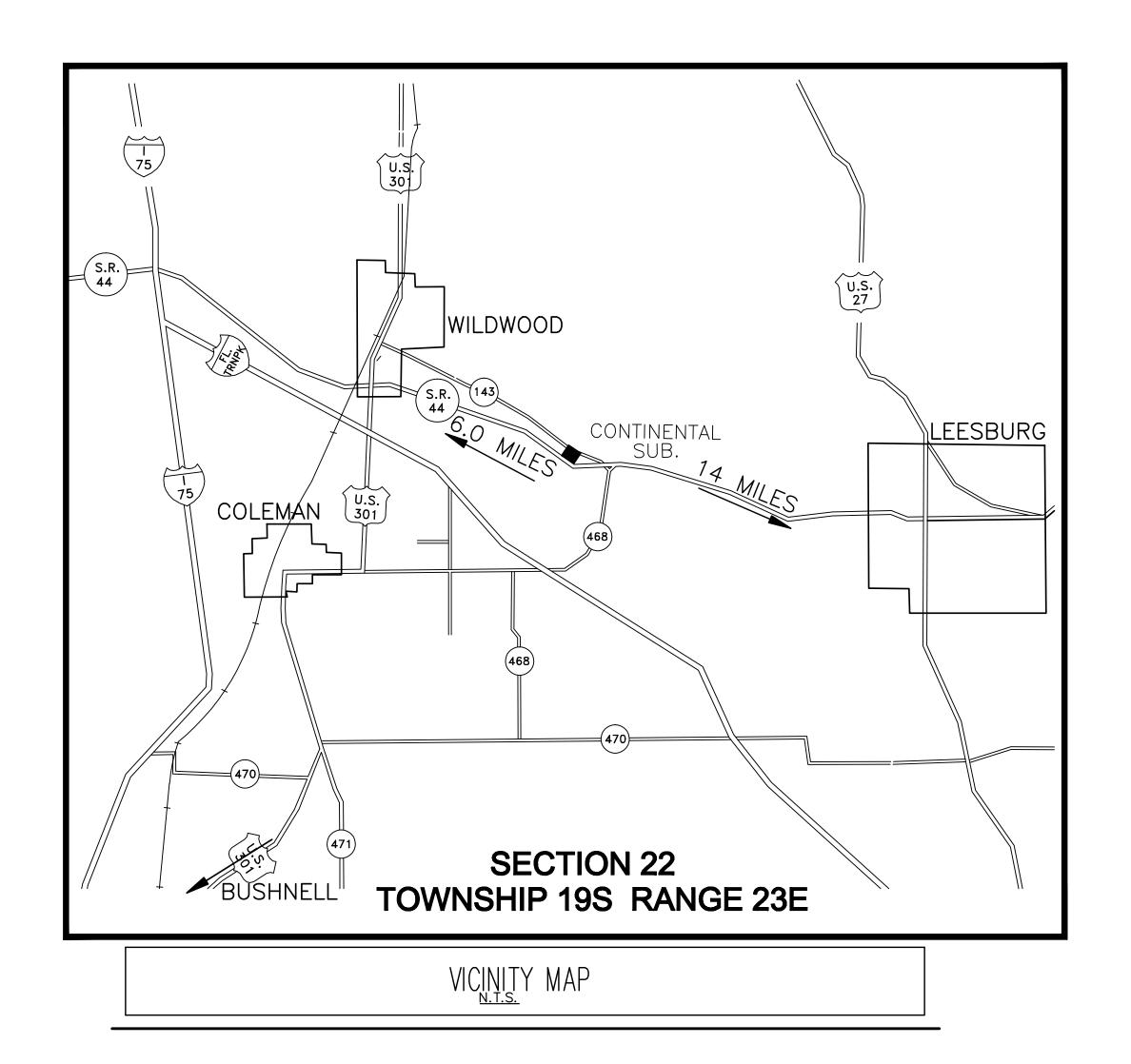
SUMTER COUNTY BOARD OF COMMISSIONERS EXECUTIVE SUMMARY

SUBJECT:	T: Sumter Electric Cooperative, Inc Major Development – Preliminary Plans for Substation Expansion – SR 44/Wildwood (Staff recommends approval).			
REQUESTED ACTION: Approve Preliminary Plans for Sumter Electric Cooperative, Inc. Substation Expansion.				
	☐ Work Session ☐ Regular Meet	(Report Only)	DATE OF MEETING: ☐ Special Meeting	August 10, 2010
CONTRACT:	N/A		Vendor/Entity:	
	Effective Date: _		Termination Date:	
	Managing Divisi	on / Dept:	Planning	
BUDGET IMPACT: Annual FUNDING SOURCE:				
☐ Capital ☐ N/A	EXPENDIT	URE ACCOUN	1:	
HISTORY/FACTS/ISSUES: The Development Review Committee is compiled of staff from several county agencies and consulting engineers. The Committee meets weekly to review applications for Use and Development Permits. The DRC's recommendations are then forwarded to the BOCC. The plans were reviewed and found to be in compliance with the Land Development Code with only minor changes required.				
Sumter Electric Cooperative, Inc Major Development – Preliminary Approval Property Owner: Sumter Electric Cooperative Inc. (SECO) – Property Developer: SECO - Project Agent: Burrell Engineering - Property Location: East SR 44/Wildwood – Total Acreage of Project: 1.44 acres MOL – Project				

Zoning: M1 - Project Proposal: Expansion of an existing substation.

CONTINENTAL SUBSTATION





OWNER/DEVELOPER:

SUMTER ELECTRIC COOPERATIVE, INC. 330 SOUTH U.S. HIGHWAY 301 SUMTERVILLE, FLORIDA 33585-0301 (352) 793-3801CONTACT: KENNY RODRIGUE

SITE ADDRESS:

6974 E. SR 44 WILDWOOD, FLORIDA 33585

DESCRIPTION

LOTS 11.12.13, AND 14, LAKE DEATON SHORES FIRST ADDITION, ACCORDING TO THE PLAT THEREOF RECORDED IN PLAT BOOK 2, PAGE 25 1/2, PUBLIC RECORDS OF SUMTER COUNTY, FLORIDA.

GENERAL NOTES:

- ALL CONSTRUCTION COVERED BY THESE PLANS SHALL COMPLY WITH THE MATERIAL REQUIREMENTS AND QUALITY CONTROL STANDARDS CONTAINED IN THE SUMTER COUNTY LAND DEVELOPMENT CODE.
- TOPOGRAPHIC SURVEY INFORMATION TAKEN FROM TOPOGRAPHIC SURVEY FOR THE SUMTER ELECTRIC CO-OP, INC. PROVIDED BY A.M. GAUDET & ASSOCIATES, INC. LB# 7158 DATED 12/29/2009
- THE FOLLOWING ARE ABBREVIATIONS AS USED IN THESE CONSTRUCTION PLANS:

A.C.C.M.P.A. = ASPHALT COATED CORRUGATED METAL PIPE ARCH = ASPHALT COATED CORRUGATED METAL PIPE = TYPICAL

= ELEVATION = RIGHT-OF-WAY

= POINT OF VERTICAL INTERSECTION = POINT OF REVERSE CURVATURE

= POINT OF INTERSECTION = POINT OF CURVATURE

= POINT OF TANGENCY = STORM MANHOLE

- = ADS BRAND N12-ST-IB PIPE CONTRACTOR SHALL IMMEDIATELY CONTACT PROJECT ENGINEER, BURRELL ENGINEERING, INC. IF PLANS ARE UNCLEAR, REQUIRING INTERPRETATION OR CONFLICTING INFORMATION IS DISCOVERED.
- SOD ALL DISTURBED AREAS WITHIN THE PROJECT UNLESS OTHERWISE NOTED.
- IF PREHISTORIC OR HISTORIC ARTIFACTS, SUCH AS POTTERY OR CERAMICS, STONE TOOLS, OR METAL IMPLEMENTS, DUGOUT CANOES, OR ANY OTHER PHYSICAL REMAINS THAT COULD BE ASSOCIATED WITH NATIVE AMERICAN CULTURES, OR EARLY COLONIAL OR AMERICAN SETTLEMENT ARE ENCOUNTERED WITHIN THE PROJECT AREA, THE CONTRACTOR SHALL CEASE ALL CONSTRUCTION ACTIVITIES IN THE IMMEDIATE VICINITY OF SUCH DISCOVERIES AND CONTACT THE OWNER OR HIS REPRESENTATIVE AS SOON AS POSSIBLE. WORK IN THE AFFECTED AREA SHALL NOT RESUME UNTIL THE CONTRACTOR IS AUTHORIZED TO PROCEED BY THE OWNER. IN THE EVENT THAT UNMARKED HUMAN REMAINS ARE ENCOUNTERED DURING CONTRUCTION. ALL WORK SHALL STOP AND THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE
- SYMBOLS, SUCH AS INLETS, HYDRANTS, MANHOLES, AND EROSION CONTROL SHOWN HEREON ARE A GRAPHIC REPRESENTATION FOR DRAWING CLARITY ONLY. CONTRACTOR SHOULD REFER TO THE INDIVIDUAL DETAILS SHOWN ON THE APPLICABLE DETAIL SHEET FOR THE APPROPRIATE INSTALLATION LOCATION AND SPECIFICATIONS.
- EXISTING UTILITIES ABOVE AND BELOW GROUND AS SHOWN HEREON ARE A COMPILATION OF AS-BUILT SURVEYS, SPECIFIC PURPOSE SURVEYS AND AS-BUILT DATA FROM PREVIOUS CONSTRUCTION. THIS INFORMATION MAY NOT BE A COMPLETE REPRESENTATION OF ALL EXISTING FACILITIES AND THE ACCURACY OF THIS INFORMATION IS NOT WARRANTED. THE CONTRACTOR SHALL FIELD VERIFY ALL UTILITIES PRIOR TO EXCAVATION AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES IMMEDIATELY. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE THE INSTALLATION OF UTILITIES WITH THE APPROPRIATE UTILITY PROVIDER.
- THIS PROJECT CONTAINS CERTAIN PREVISIONS DEALING WITH THE NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM (NPDES) WHICH THE CONTRACTOR SHALL BECOME AWARE OF AND WILL ABIDE BY. THESE ARE INCLUDED IN THE STORMWATER POLLUTION PREVENTION PLAN WITHIN THESE PLANS, AS WELL AS A SEPARATE DOCUMENT, WHICH IS PART OF THE STORMWATER POLLUTION PREVENTION PLAN.

ENGINEER'S CERTIFICATION NOTE:

This certification is provided as confirmation that the site design, roadways, drainage, water and/or sewer facilities depicted on these plans have been designed in accordance with generally accepted engineering practices and the requirements of permitting agencies having Jurisdiction over such facilities. It is not intended to certify the accuracy of existing surface features or subsurface conditions, which may have been used for design, but were certified by other professionals.

Schedule of Sheets

SHEET NO.	CONTENTS
CO-02-101 CO-02-102 CO-02-103a CO-02-103b CO-02-104	Title Page Survey Survey Survey Storm Water Pollution
CO-02-105 CO-02-106 CO-02-107 CO-02-108 CO-02-109 CO-02-1010	Prevention Plan Site Geometry Plan Grading & Drainage Plan DRA Details Drainage & Roadway Details Installation Specifications Installation Specifications

SUMTER ELECTRIC COOPERATIVE, INC. 330 SOUTH US 301

SUMTERVILLE, FLORIDA 33585

FLORIDA - 16 - SUMTER

Sumter County Submittal Set — Preliminary and Engineering Review

CONTINENTAL SUBSTATION CIVIL INFORMATION

Work Order 900852

BURRELL ENGINEERING, INC. CIVIL ENGINEERING CA No. 7973 12005 N. FLORIDA AVE DUNNELLON, FL 34434 PH. 352-489-4144 FAX 352-489-4741 BEI JOB NO. 09-53, FILE NO. K-10, DRAWING NO. Base 09-53, LAYOUT

Revision: Drawn by: Date: **DFS** DFS 05-14-10 Add Survey sheet C0-02-103b, renumber survey sheets, update sheet index on cover page Scale







KEN FRINK, P.E.

STATE OF FLORIDA DATE _____

REG. ENGINEER NO. 47750

<u>LEGEND</u>

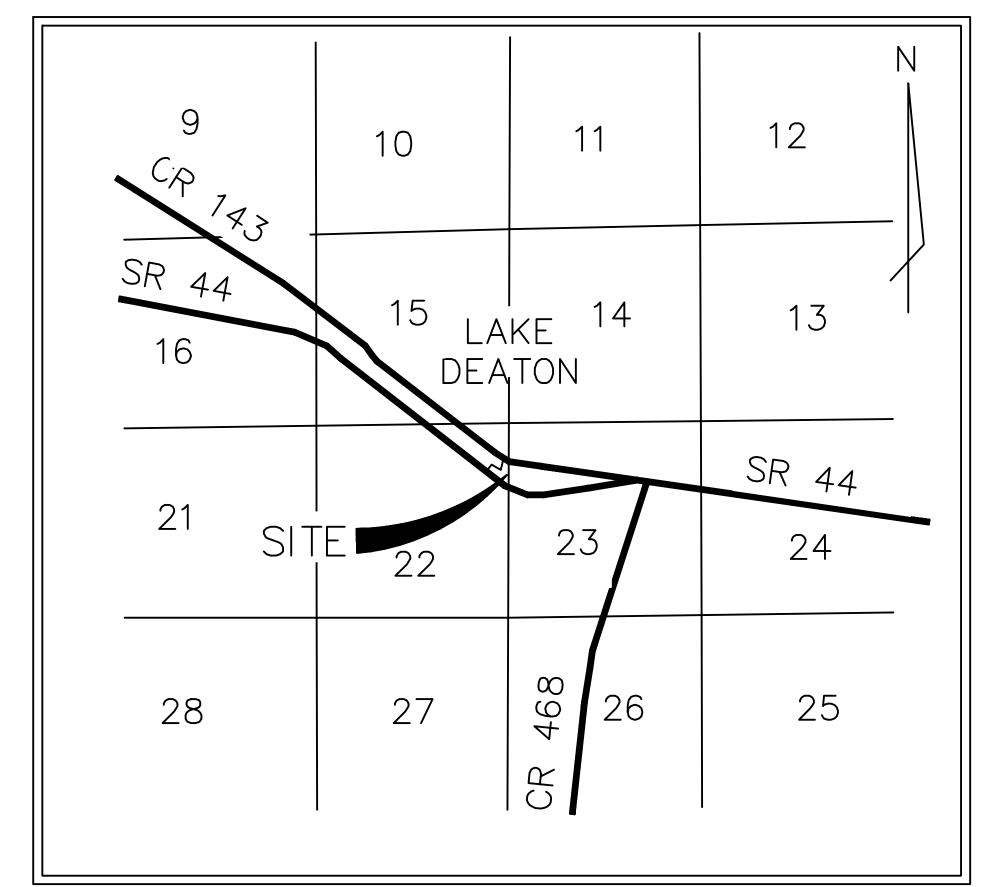
- = FOUND IRON PIPE
- \bullet = FOUND 5/8" IRON ROD AND CAP(FIRC)
- = FOUND 4"X4" CONCRETE MARKER (FCM)
- Q = CENTER LINE
- $-\circ-;-\dot{x}-=$ FENCE LINE
 - → = LINE NOT DRAWN TO SCALE
 - R = RADIUS
 - = ARC LENGTH
 - = TANGENT LENGTH
 - D = CENTRAL ANGLE (DELTA)
 - C = CHORD LENGTH
 - CB = CHORD BEARING
- (FDOT) FLORIDA DEPT OF TRANSPORTATION
 - TBM = TEMPORARY BENCH MARK
 - = CHAIN LINK FENCE
 - R/W = RIGHT OF WAY LINE
 - = GUY POLE
 - = POWER POLE
 - _ = POWER POLE W/UNDERGROUND
 - UFO = UNDERGROUND FIBER OPTIC
 - OHE = OVERHEAD POWER LINE
 - = UNDERGROUND ELECTRIC
 - CMP = CORRUGATED METAL PIPE
 - RCP = REINFORCED CONCRETE PIPE
 - HDPE = HIGH DENSITY POLYETHYLENE
 - = TELEPHONE RISER
 - = GUY ANCHOR
 - SHW = SEASONAL HIGH WATER
 - ELEV = ELEVATION
 - MES = MITERED END SECTION

CERTIFY TO:

SUMTER ELECTRIC COOPERATIVE, INC. BURRELL ENGINEERING, INC.

I HEREBY CERTIFY THAT THE HEREON DEPICTED PARCEL OF LAND WAS SURVEYED UNDER MY DIRECTION AND THAT SAID SURVEY CONFORMS TO THE MINIMUM TECHNICAL STANDARDS SET FORTH BY THE FLORIDA BOARD OF LAND SURVEYORS IN CHAPTER 61G17-6, FLORIDA ADMINISTRATIVE CODE, PURSUANT TO SECTION 472.027, FLORIDA STATUTES.

TOPOGRAPHIC SURVEY CONTINENTAL SUBSTATION



LOCATION MAP TOWNSHIP 19S RANGE 23E 1"=1/2 MILE

DESCRIPTION

LOTS 11,12,13, AND 14, LAKE DEATON SHORES FIRST ADDITION, ACCORDING TO THE PLAT THEREOF RECORDED IN PLAT BOOK 2, PAGE 25 1/2, PUBLIC RECORDS OF SUMTER COUNTY, FLORIDA.

NOTES

- 1. BEARINGS ARE BASED ON GRID NORTH WITH THE EAST BOUNDARY OF THE NE 1/4 OF SECTION 22-19-23 BEARING S.00°17'32"W.
- 2. BOUNDARY AND DESCRIPTION INFORMATION BASED ON PREVIOUS SURVEY BY HUNT'S SURVEYING AND MAPPING DATED FEBRUARY 2, 2007 AND ROTATED TO BEARING BASE STATED ABOVE. THIS IS NOT A BOUNDARY SURVEY.
- 3. LANDS WERE NOT ABSTRACTED BY THIS COMPANY FOR OWNERSHIP, EASEMENTS OR OTHER INSTRUMENTS OF RECORD WHICH MAY AFFECT USE OR TITLE OF SAID LANDS.
- 4. ALL RIGHT-OF-WAYS SHOWN ARE PHYSICALLY OPEN UNLESS NOTED.
- 5. NOT VALID WITHOUT THE SIGNATURE AND THE ORIGINAL RAISED SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER.
- 6. ELEVATIONS BASED ON NAVD 1988 AND REFERENCED TO NGS BENCHMARK R 57 RESET 1958 WITH A PUBLISHED ELEVATION OF 70.6 FEET. SUPERSEDED NGVD 1929 ELEVATION LISTED AT 71.5 FEET WITH A DATUM DIFFERENCE OF -0.9 FEET NGVD 1929 TO NAVD 1988.
- 7. COORDINATES SHOWN HEREON BASED ON NAD 83, STATE PLANE ZONE FLORIDA WEST
- 8. DATE OF FIELD SURVEY: DECEMBER 22, 2009
- 9. UNDERGROUND LOCATES PER SUNSHINE ONE CALL TICKET NUMBER 348905723. THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM MARKINGS BY OTHERS. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR THAT SUCH UTILITIES ARE IN THE EXACT LOCATION INDICATED.
- 10. THE WETLAND BOUNDARIES DEPICTED HEREON ARE BASED ON MARKINGS BY OTHERS AND ARE NUMBERED HEREON ACCORDINGLY.
- 11. ACCORDING TO THE NATIONAL FLOOD INSURANCE RATE MAP FOR SUMTER COUNTY, FLORIDA, COMMUNITY PANEL NO. 120296 0125 B, EFFECTIVE DATE OF MARCH 15, 1982, THE PROPERTY DESCRIBED HEREIN LIES IN ZONE "C", AN AREA DEFINED AS MINIMAL FLOODING.

A.M. GAUDET & ASSOCIATES, INC. LB#7158 ANDRUS M. GAUDET REGISTERED LAND SURVEYOR # 5316 STATE OF FLORIDA

Revision:	BY:	Date:	Draw
ADDED SHEET 3 FOR WETLAND DETAIL	AMG	05/10/10	AN
			Sc
			Ν

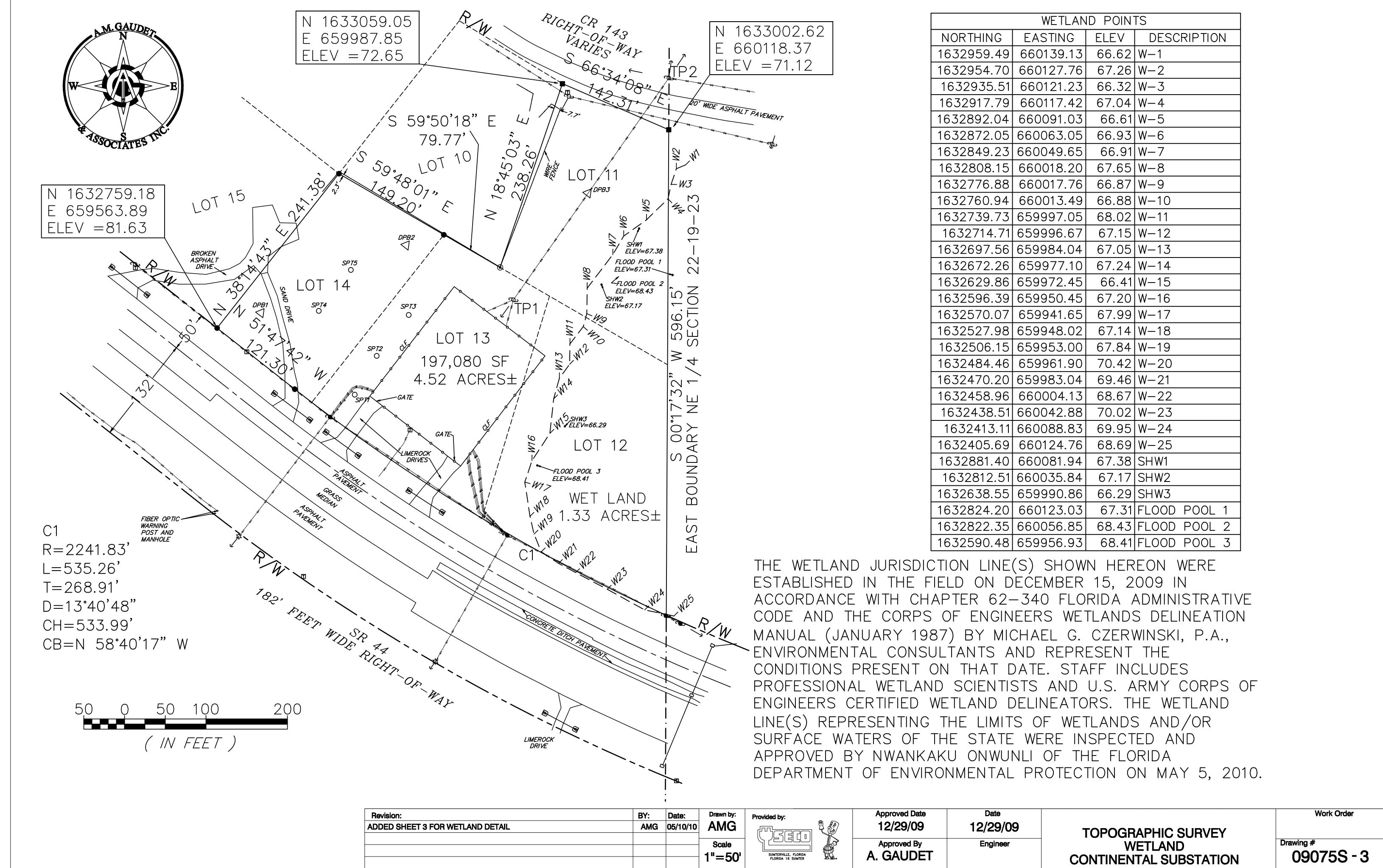




Approved Date 12/29/09 12/29/09 Engineer Approved By A. GAUDET

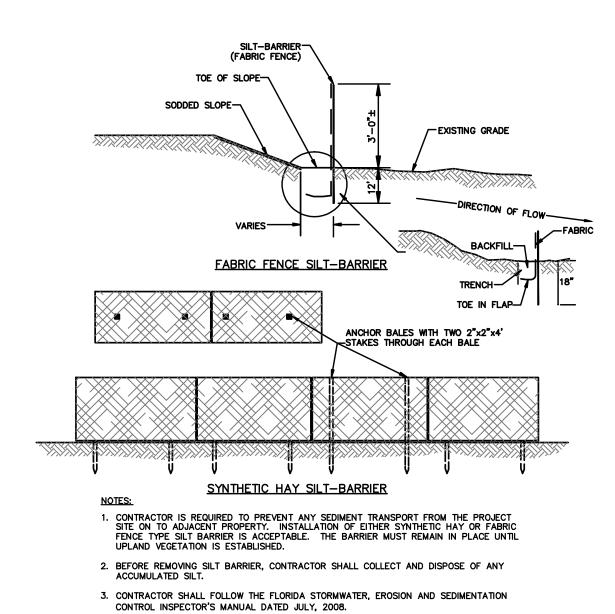
TOPOGRAPHIC SURVEY CONTINENTAL SUBSTATION

Work Order Drawing # 09075S - 1



Z:\SECO Continental Substation\dwg\Finals\Base U9-53 survey.dwg, 36 DWG To PDF.pc3, KW

CO - O2 - 103b



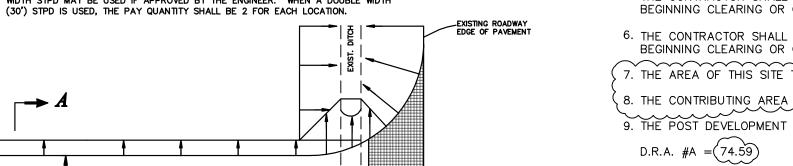
PERIMETER EROSION AND SEDIMENT CONTROL

- 1. A SOIL TRACKING PREVENTION DEVICE (STPD) SHALL BE CONSTRUCTED AT LOCATIONS DESIGNATED BY THE ENGINEER FOR POINTS OF EGRESS FROM UNSTABILIZED AREAS OF THE PROJECT TO PUBLIC ROADS WHERE OFFSITE TRACKING OF MUD COULD OCCUR. TRAFFIC FROM UNSTABILIZED AREAS OF THE CONSTRUCTION PROJECT SHALL BE DIRECTED THRU A STPD. BARRIERS, FLAGGING, OR OTHER POSITIVE MEANS SHALL BE USED AS REQUIRED TO LIMIT AND DIRECT VEHICULAR EGRESS ACROSS THE STPD.
- 2. THE CONTRACTOR MAY PROPOSE AN ALTERNATIVE TECHNIQUE TO MINIMIZE OFFSITE TRACKING OF SEDIMENT. THE ALTERNATIVE MUST BE REVIEWED AND APPROVED BY THE ENGINEER PRIOR TO ITS USE.
- 3. ALL MATERIALS SPILLED, DROPPED, OR TRACKED ONTO PUBLIC ROADS (INCLUDING THE STPD AGGREGATE AND CONSTRUCTION MUD) SHALL BE REMOVED DAILY, OR MORE FREQUENTLY IF SO DIRECT BY THE ENGINEER.
- 4. AGGREGATES SHALL BE AS DESCRIBED IN SECTION 901 EXCLUDING 901-2.3. AGGREGATES SHALL BE FDOT SIZE #1. IF THIS SIZE IS NOT AVAILABLE, THE NEXT AVAILABLE SMALLER SIZE AGGREGATE MAY BE SUBSTITUTED WITH THE APPROVAL OF THE ENGINEER. SIZES CONTAINING EXCESSIVE SMALL AGGREGATE WILL TRACK OFF THE PROJECT AND ARE UNSUITABLE.
- 5. THE SEDIMENT PIT SHOULD PROVIDE A RETENTION VOLUME OF 3600 CUBIC FEET/ACRE OF SURFACE AREA DRAINING TO THE PIT. WHEN THE STPD IS ISOLATED FROM OTHER DRAINAGE AREAS, THE FOLLOWING PIT VOLUMES WILL SATISFY THIS REQUIREMENT: 15'x50'= 100 FT* 30'x50'=200 FT* AS AN OPTION TO THE SEDIMENT PIT, THE WIDTH OF THE SWALE BOTTOM CAN BE INCREASED TO OBTAIN THE VOLUME. WHEN THE SEDIMENT PIT OR SWALE VOLUME HAS BEEN REDUCED TO ONE HALF, IT SHALL BE CLEANED. WHEN A SWALE IS USED, HAY BALES OR SILT FENCE SHALL BE PLACED ALONG THE ENTIRE LENGTH.

SLOPE TO DRAIN (0.1 FT/FT MIN.)

SECTION A-A

- 6. THE SWALE DITCH DRAINING THE STPD SHALL HAVE A 0.2% MINIMUM AND A 1.0% MAXIMUM GRADE ALONG THE STPD AND TO THE SEDIMENT PIT. MITERED EMD SECTIONS ARE NOT REQUIRED WHEN THE SIDEDRAIN PIPE SATISFIES THE CLEAR ZONE REQUIREMENTS.
- 8. THE STPD SHALL BE MAINTAINED IN A CONDITION THAT WILL ALLOW IT TO PERFORM ITS. FUNCTION. TO PREVENT OFFSITE TRACKING, THE STPD SHALL BE RINSED (DAILY WHEN IN USE) TO MOVE ACCUMULATED MUD DOWNWARD THRU THE STONE.
 ADDITIONAL STABILIZATION OF THE VEHICULAR ROUTE LEADING TO THE STPD MAY BE REQUIRED TO LIMIT THE MUD TRACKED.
- 9. A STPD SHALL BE PAID FOR UNDER THE CONTRACT UNIT PRICE FOR SOIL TRACKING PREVENTION DEVICE, EA. THE UNIT PRICE SHALL CONSTITUTE FULL COMPENSATION FOR CONSTRUCTION, MAINTENANCE, REPLACEMENT OF MATERIALS, REMOVAL, AND RESTORATION OF THE AREA UTILIZED FOR THE STPD; INCLUDING BUT NOT LIMITED TO EXCAVATION, GRADING, TEMPORARY PIPE (INCLUDING MES WHEN REQUIRED), FILTER FABRIC, AGGREGATE, PAVED TURNOUT (INCLUDING ASPHALT AND BASE CONSTRUCTION), DITCH STABILIZATION, APPROACH ROUTE STABILIZATION, SEDIMENT REMOVAL AND DISPOSAL, WATER, RINSING AND CLEANING OF THE STPD AND CLEANING OF PUBLIC ROADS, GRASSING AND SOD. HAY BALES SHALL BE PAID FOR UNDER THE CONTRACT UNIT PRICE FOR HAY OR STRAW BALLED, EA. SILT FENCE SHALL BE PAID FOR UNDER THE CONTRACT UNIT FOR STAKED SILT FENCE, LF.
- 10. THE NOMINAL SIZE OF A STANDARD STPD IS 15'x50' UNLESS OTHERWISE SHOWN IN THE PLANS. IF THE VOLUME OF ENTERING AND EXITING VEHICLES WARRANT, A 30' WIDTH STPD MAY BE USED IF APPROVED BY THE ENGINEER. WHEN A DOUBLE WIDTH



APPROACH LENGTH (INDEX NO. 515). MAY BE DELETED IF APPROVED BY THE ENGINEER. SECTION B-B TRANSITION DETAIL

> SOIL TRACKING PREVENTION DEVICE - TYPE A N.T.S. (FDOT INDEX NO. 106)

LEGEND:

→·→·→ FLOW ARROW (SWALE) 88 PRE DEVELOPMENT CONTOURS (1' INTERVAL) EROSION CONTROL (SILT SCREEN OR HAY BALES)

WATER SHED LINES PROJECT AREA

INLETS AND PIPES

AREAS WITH 4:1 SLOPES

AREA OF 4"- NO. 57 GRANITE, NO LIMEROCK BASE, W/ 10" STABILIZED

DRIVEWAY AREA OF 4"- NO. 57 GRANITE WITH A 6" LIMEROCK BASE

8" LIMEROCK W/ 1-1/2" SP9.5

- 1. PRIOR TO THE COMMENCEMENT OF CONSTRUCTION, THE CONTRACTOR SHALL, IN ACCORDANCE WITH SECTION 403.0885, FLORIDA STATUTES (F.S.), PREPARE AND SUBMIT A NOTICE OF INTENT TO USE GENERIC PERMIT FOR STORMWATER DISCHARGE FROM LARGE AND SMALL CONSTRUCTION ACTIVATES (RULE 62-621.300(4), FAC), MORE COMMONLY KNOWN AS AN NPDES-NOI. THE CONTRACTOR SHALL BE THE APPLICANT AND RESPONSIBLE AUTHORITY. THE CONTRACTOR SHALL EMPLOY AND MAKE AVAILABLE TO THIS PROJECT AN INDIVIDUAL WHO IS LAWFULLY CAPABLE OF ACTING AS THE RESPONSIBLE AUTHORITY.
- 2. THE CONTRACTOR SHALL ALSO REVIEW AND BE FAMILIAR WITH THE STORMWATER POLLUTION PREVENTION PLAN (SWPPP) PREPARED FOR THIS PROJECT. COPIES OF THIS DOCUMENT SIGNED BY THE CONTRACTOR SHALL BE PROVIDED TO THE OWNER PRIOR TO COMMENCEMENT OF CONSTRUCTION. SHOULD THE EROSION CONTROL METHODS CHANGE AND NEW OR ADDITIONAL CONTRACTORS BE ADDED TO THE PROJECT THE CONTRACTOR SHALL BE RESPONSIBLE FOR AMENDING THE SWPPP AND HAVING NEW CONTRACTORS SIGN THE SWPPP. COPIES OF THE AMENDED SWPPP SHALL BE ATTACHED TO THE ORIGINAL SWPPP AND A COPY PROVIDED TO THE OWNER AND ANOTHER COPY KEPT ON SITE. IF A SWPPP HAS NOT BEEN PREPARED FOR THIS PROJECT, THE CONTRACTOR SHALL PREPARE IT.
- 3. DURING CONSTRUCTION THE CONTRACTOR SHALL PERFORM THE MONITORING, INSPECTIONS AND PREPARE INSPECTION REPORTS IN CONFORMANCE WITH THE ABOVE STATUTE. THIS SHALL INCLUDE WEEKLY INSPECTIONS OR INSPECTIONS WITHIN 24 HOURS OF A RAIN EVENT OF 0.50 INCHES OR LARGER AND COMPLETION OF THE NPDES INSPECTION FORM (COPY INCLUDED AT THE END OF THE SWPPP) AND AT THE CONCLUSION OF CONSTRUCTION. AT THE END OF CONSTRUCTION THE CONTRACTOR SHALL COMPLETE AND SUBMIT THE NOTICE OF TERMINATION (NOT).
- 4. PRIOR TO EACH PAY REQUEST, THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER AND OWNER COPIES OF ALL DOCUMENTATION (INSPECTION REPORTS, AMENDED SWPPP, CORRESPONDENCE, ETC ...) PERTAINING TO THIS REQUIREMENT. THE OWNER RESERVES THE RIGHT TO WITHHOLD OR REDUCE ANY PAY REQUESTS IF THESE DOCUMENTS ARE NOT PROPERLY PREPARED AND SUBMITTED. PRIOR TO THE APPROVAL OF FINAL PAYMENT, THE CONTRACTOR SHALL SUBMIT ALL AND ANY REMAINING DOCUMENTATION TO THE ENGINEER AND OWNER PERTAINING TO THE REQUIREMENT. THIS SHALL INCLUDE COPIES OF THE NOT.
- 5. THE NATURE OF THIS PROJECT IS AN UPGRADE TO AN EXISTING ELECTRIC SUBSTATION. THE CONTRACTOR SHALL INSTALL ALL SILT FENCE/EROSION CONTROL MEASURES BEFORE BEGINNING CLEARING OR GRUBBING OPERATIONS
- 6. THE CONTRACTOR SHALL INSTALL ALL SILT FENCE/EROSION CONTROL MEASURES BEFORE BEGINNING CLEARING OR GRUBBING OPERATIONS.
- THE AREA OF THIS SITE THAT IS TO UNDERGO EXCAVATION IS 2.89 AC.
- 8. THE CONTRIBUTING AREA TO THE SINGLE ONLINE DRA IS 2.09 AC.

 9. THE POST DEVELOPMENT RUNOFF COEFFICIENTS OF THIS SITE ARE AS FOLLOWS:
- 10. ACCORDING TO THE SUMTER COUNTY NRCS SOIL SURVEY, THE SOIL TYPES FOUND ON THIS SITE ARE CANDLER SAND (4), MILLHOPPER SAND (11), 0 TO 5 PERCENT SLOPES AND OKEELANTA MUCK (18).
- 11. THIS SITE WAS DESIGNED TO CONTROL STORM WATER RUNOFF FOR A 25 YR.., 24 HOUR STORM WHICH CONSISTS OF (8.5) INCHES OF RAINFALL.
- 12. STABILIZATION WILL OCCUR IN ALL AREAS.
- 13. CONTRACTOR TO MAINTAIN ALL EROSION AND SEDIMENT CONTROL DEVICES UNTIL CONSTRUCTION IS COMPLETE.
- 14. EROSION CONTROL SHOWN OUTSIDE THE PROPERTY LINE FOR CLARITY PURPOSES ONLY. EROSION CONTROL TO BE INSTALLED ON OR WITHIN PROPERTY BOUNDARY.
- 15. CONTRACTOR IS RESPONSIBLE FOR CONTROL OF WINDBORNE SEDIMENT TRANSPORT. SHOULD DRY WINDY CONDITIONS OCCUR DURING CONSTRUCTION THAT CREATE THE POTENTIAL FOR WINDBORNE SEDIMENT TRANSPORT, THE CONTRACTOR SHALL TAKE NECESSARY STEPS TO MINIMIZE ADVERSE EFFECTS, INCLUDING PROVIDING WATER FOR SEDIMENT CONTROL AND/OR
- 16. IF CONSTRUCTION ACTIVITY CEASES FOR MORE THAN SEVEN DAYS THE CONTRACTOR SHALL STABILIZE THE AREA WITH SEED OR SOD.
- 17. THE SOIL TRACKING DEVICE SHALL BE INSTALLED IF, IN THE OPINION OF THE ENGINEER, PERMITTING AGENCY, OR OWNER, SOIL TRACKING BECOMES A PROBLEM.

STATE AND	LOCAL PERMITTING REQUIRED FROM:	<u>YES</u>	<u>NO</u>
LOCAL	SUMTER COUNTY	√	
F.D.E.P.		√	
F.D.O.T.		J	

KEN FRINK, P.E. REG. ENGINEER NO. 47750 STATE OF FLORIDA

DATE ___

Work Order 900852

Drawing # CO- 02 - 104

BURRELL ENGINEERING, INC. CIVIL ENGINEERING CA No. 7973

BEI JOB NO. 09-53, FILE NO. K-10, DRAWING NO. Base 09-53, LAYOUT

12005 N. FLORIDA AVE DUNNELLON, FL 34434 PH. 352-489-4144 FAX 352-489-4741

GRAPHIC SCALE

(IN FEET)

Revision: Drawn by: **DFS** 1. REVISED PER FDEP COMMENTS K.F. 4/28/10 2. REVISED PER COUNTY COMMENTS K.F. 7/12/10 Scale

ELEV=67.38

FLOOD POOL 1

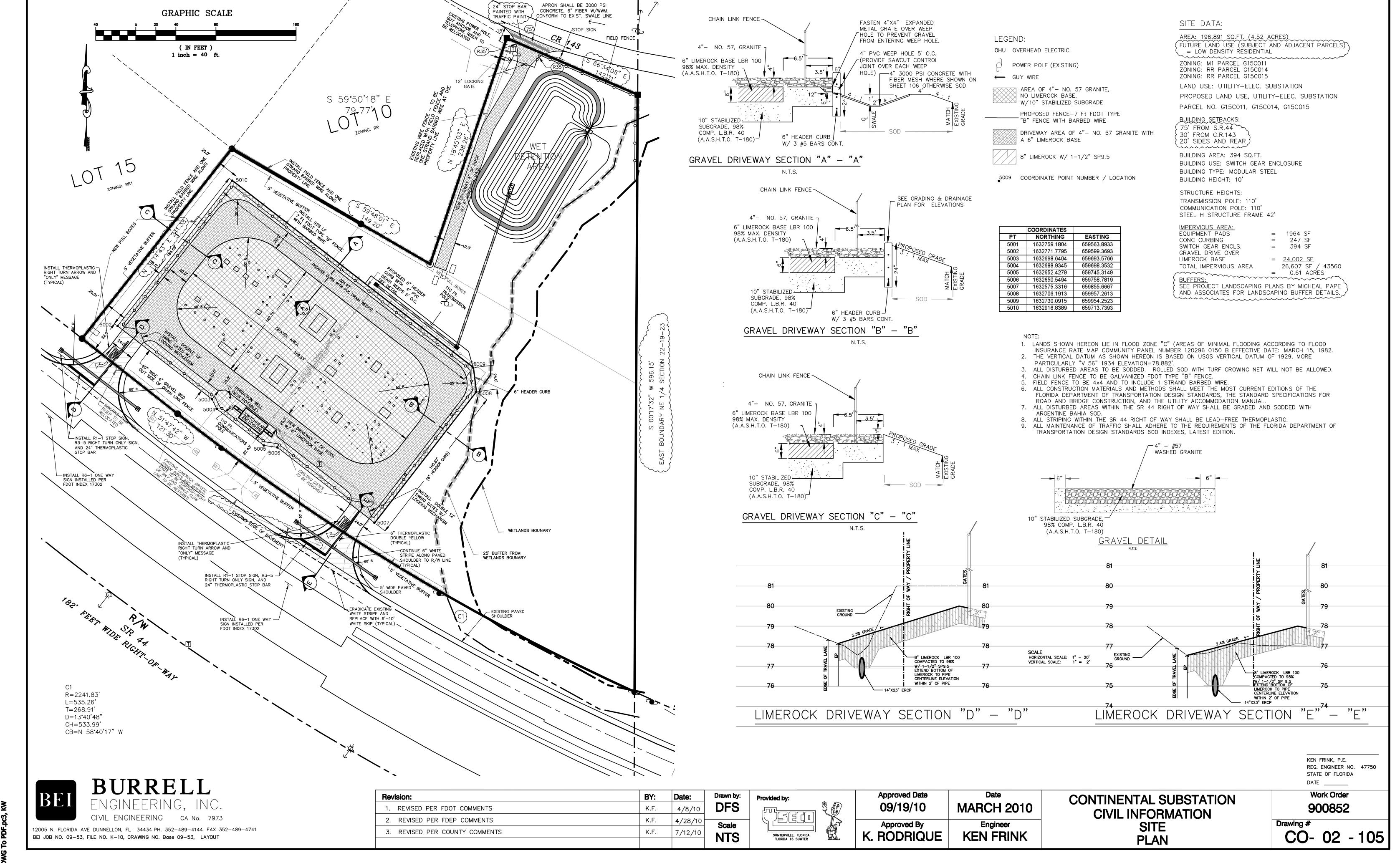
ELEV=67.31

Provided by: SUMTERVILLE, FLORIDA FLORIDA 16 SUMTER Approved Date 03/19/10 Approved By

MARCH 2010 Engineer **KEN FRINK**

RURAL CONNECTION DETAIL

CONTINENTAL SUBSTATION CIVIL INFORMATION SURFACE WATER POLLUTION PREVENTION PLAN



2:\SECO Continental Substation\dwg\Finals\Base 09-53.dwg, C0-02-105, 7/16/2010 11:56:20 AM,

N 1633059.05 E 659987.85 ELEV=72.70 LEGEND:

FLOW ARROW (DIRECTION OF FLOW)

— PROPOSED CONTOURS (1' INTERVAL)

FDOT MITERED END

INLETS AND PIPES

TIME OF CONCENTRATION

PRE DEVELOPMENT CONTOURS (1' INTERVAL)

MITERED END WITH ENERGY DISSAPATOR

PROPOSED GRADES CURB = GRADE AT TOP OF GRAVEL SURFACE

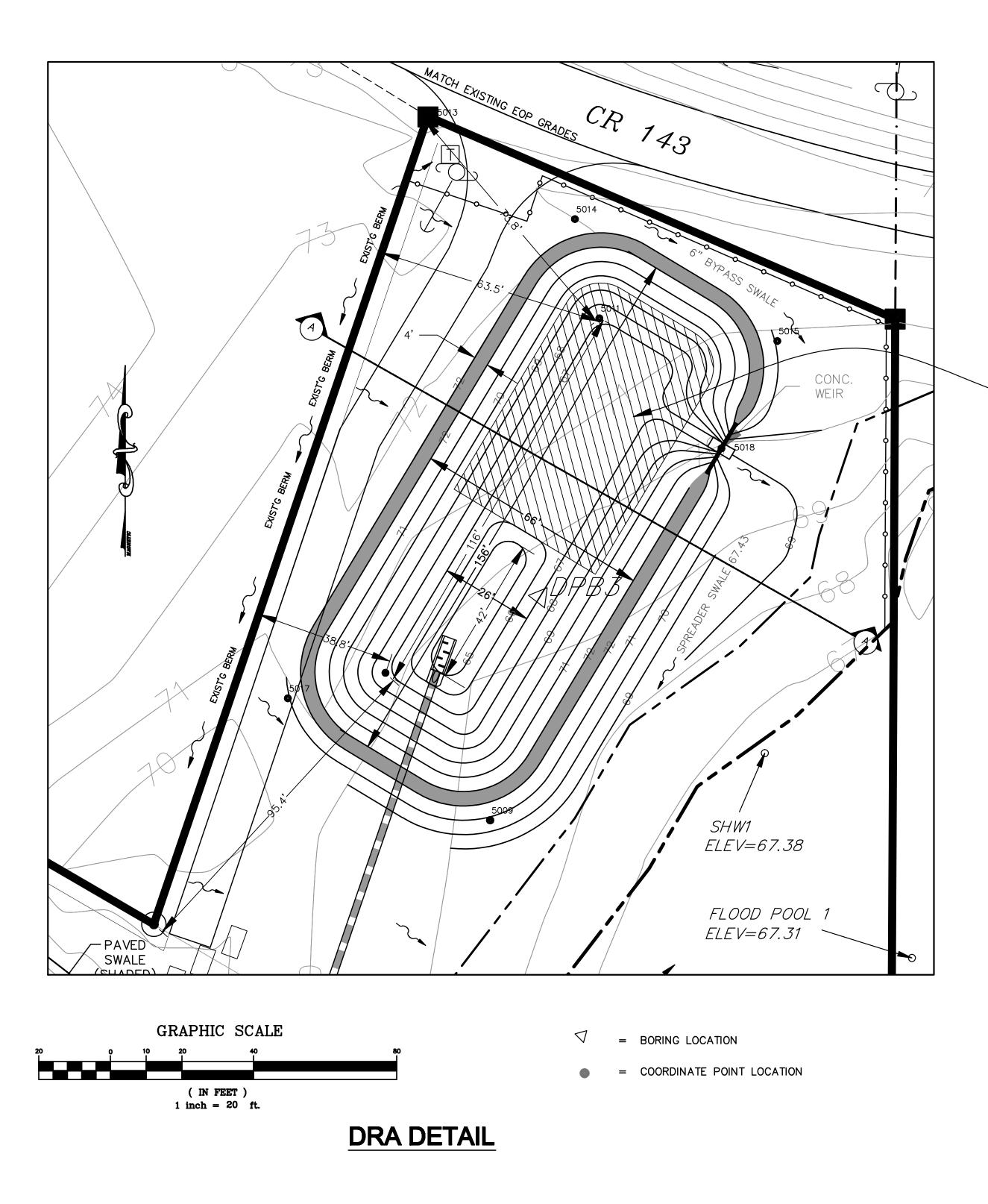
GRAVE = GRADE AT TOP OF GRAVEL SURFACE

GRAPHIC SCALE

(IN FEET)

1 inch = 30 ft.





	COORDINATES	
PT	NORTHING	EASTING
5011	1632916.8389	659713.7393
5012	1632903.8271	659975.9761
5013	1633059.2189	659987.8138
5014	1633030.5271	660028.8941
5015	1632996.4773	660085.4188
5016	1632862.6613	660005.2351
5017	1632896.7111	659948.7105
5018	1632966.4937	660069.8430

GRAVEL DRIVE

72

10P = 72.0

25 YR / 24 HR PEAK ELEV. = 71.39

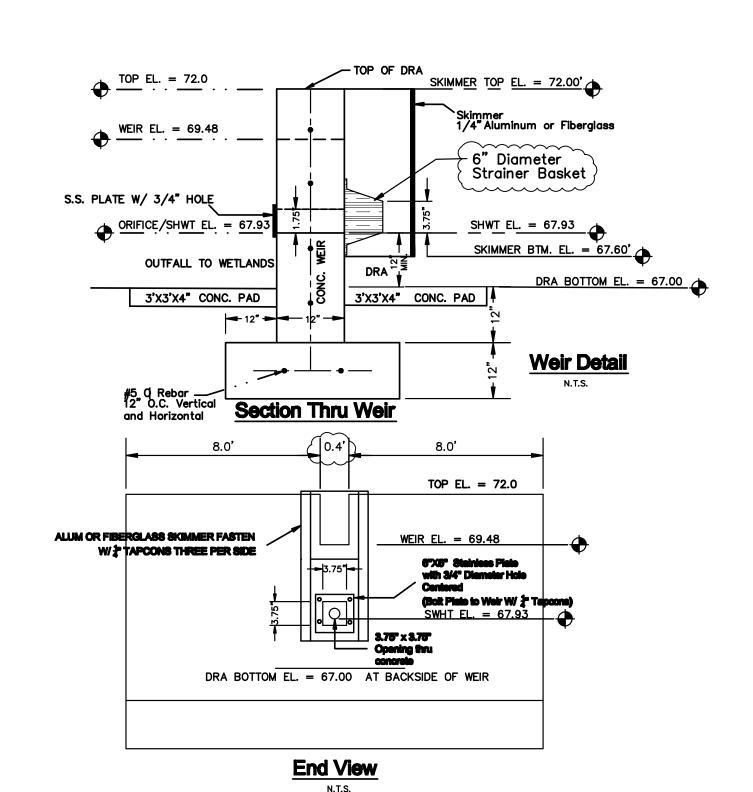
71

EXISTING GROUND

72

10P = 72.0

1



LEGEND:

LITTORAL SHELF

= 2,640 SF

2640 SF

3484 X 0.35 = 1219 LITTORAL SHELF PROVIDED:

INDICATES LITTORAL SHELF

<u>LITTORAL SHELF REQUIRED:</u>
35% OF AREA OF CONTROL ELEVATION

THE FOLLOWING NORMAL MAINTENANCE ITEMS, INCLUDING CLEANING OR REPLACEMENT OF THE VARIOUS ELEMENTS OF THE SYSTEM, WILL BE REQUIRED FOR THE SURFACE WATER MANAGEMENT SYSTEM TO CONTINUE TO OPERATE AS DESIGNED.

GENERAL MAINTENANCE

1. ALL SURFACE WATER MANAGEMENT SYSTEM PIPES, INLETS, CATCH BASINS, MANHOLES, FLUMES, POND INFLOW AND OUTFALL STRUCTURES (INCLUDING OIL SKIMMERS), AND DISCHARGE PIPES SHALL BE INSPECTED ON A REGULAR BASIS (MONTHLY OR QUARTERLY) AND FOLLOWING SIGNIFICANT STORM EVENTS. THEY SHOULD BE MAINTAINED BY REMOVING BUILT—UP DEBRIS AND VEGETATION AND REPAIRING DETERIORATING STRUCTURES.

2. CHEMICALS, OILS, GREASES OR SIMILAR WASTES ARE NOT TO BE DISPOSED OF IN THE SURFACE WATER MANAGEMENT SYSTEM OR THROUGH STORM SEWERS. TREATMENT PONDS ARE DESIGNED TO TREAT NORMAL ROAD, PARKING LOT, ROOF AND YARD RUNOFF ONLY. SOME CHEMICALS MAY INTERFERE WITH A TREATMENT PONDIS FUNCTIONS OR KILL VEGETATION AND WILDLIFE. DISPOSE OF THESE POTENTIALLY DANGEROUS MATERIALS PROPERLY BY TAKING THEM TO RECYCLING FACILITIES OR TO COLLECTION LOCATIONS SPONSORED BY MANY LOCAL GOVERNMENTS.

ALSO, DO NOT DISPOSE OF GRASS CLIPPINGS IN A SURFACE WATER MANAGEMENT SYSTEM. GRASS CLIPPINGS POSE PROBLEMS BY SMOTHERING DESIRABLE VEGETATION, CLOGGING OUTFALL STRUCTURES AND, WHEN THEY DECOMPOSE, MAY CAUSE UNSIGHTLY ALGAE BLOOMS THAT CAN KILL FISH.

3. ACCUMULATED POND SEDIMENTS MAY CONTAIN HEAVY METALS SUCH AS LEAD, CADMIUM AND MERCURY, AS WELL AS OTHER POTENTIALLY HAZARDOUS MATERIALS. THEREFORE, SEDIMENTS REMOVED FROM SURFACE WATER MANAGEMENT SYSTEM INLETS, PIPES AND PONDS SHALL BE DISPOSED OF AT AN APPROVED FACILITY (CHECK WITH YOUR COUNTY SOLID WASTE DEPARTMENT OR THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION FOR DISPOSAL FACILITIES APPROVED TO ACCEPT TREATMENT POND SEDIMENT).

4. AVOID CAUSING EROSION OR SILTATION TO ADJACENT OR OFF—SITE AREAS DURING ANY

REPAIR OR MAINTENANCE ACTIVITY.

5. ALTERATIONS (FILLING, ENLARGING, ETC.) OF ANY PART OF THE SURFACE WATER

MANAGEMENT SYSTEM ARE NOT PERMITTED WITHOUT PRIOR APPROVAL FROM THE DEPARTMENT AND ALL OTHER APPLICABLE GOVERNING AGENCIES.

6. MOSQUITO GROWTH CAN BE MINIMIZED IN A SURFACE WATER MANAGEMENT SYSTEM BY THE FOLLOWING MEASURES:

DO NOT DUMP GRASS CLIPPINGS OR OTHER ORGANIC DEBRIS INTO A SURFACE WATER MANAGEMENT SYSTEM — DECAYING GRASS CLIPPINGS AND OTHER DECOMPOSING VEGETATION CREATE IDEAL CONDITIONS FOR BREEDING MOSQUITOES.

I CLEAN OUT ANY OBSTRUCTIONS THAT GET INTO THE SYSTEM. DEBRIS CAN OBSTRUCT FLOW AND HARBOR MOSQUITO EGGS AND LARVAE.

REMOVE WATER LETTUCE AND WATER HYACINTH, WHICH NOURISH AND SHELTER MOSQUITO

LARVAE.

STOCK PONDS WITH PREDATORY MOSQUITO FISH - GAMBUSIA MINNOWS, WHICH MAY BE COLLECTED FROM OTHER PONDS AND DITCHES AND INTRODUCED INTO YOUR SWMS.

WET DETENTION POND

1. THE SIDE SLOPES THE DETENTION PONDS AND CONNECTING SWALES SHALL BE INSPECTED FOR BARE SPOTS, DAMAGE OR EROSION. BARE AREAS SHALL BE SODDED OR SEEDED TO REPLACE THE GRASS COVER. IN THE CASE OF EROSION, REPLACE THE MISSING SOIL AND BRING THE AFFECTED AREAS BACK TO GRADE.

2. MAINTAIN, RATHER THAN REMOVE, WETLAND VEGETATION THAT BECOMES ESTABLISHED IN THE LITTORAL ZONE. DO NOT CUT, MOW, USE HERBICIDE OR GRASS CARP TO REMOVE ANY OF THE VEGETATION IN THE LITTORAL ZONE.

3. THE %—INCH CONTROL ORIFICE IS SMALL AND VULNERABLE TO CLOGGING. ON A QUARTERLY OR AS—NEEDED BASIS, AND FOLLOWING SIGNIFICANT STORM EVENTS, INSPECT THE AREA IN FRONT OF THE MAY OUTFALL CONTROL STRUCTURES AND REMOVE BUILT—UP SEDIMENTS, VEGETATION, AND DEBRIS THAT IMPAIR THE OPERATION OF THE STRUCTURE.

4. ON A QUARTERLY OR AS—NEEDED BASIS, AND FOLLOWING SIGNIFICANT STORM EVENTS, INSPECT THE INLET STRUCTURES AND REMOVE BUILT—UP SEDIMENTS, VEGETATION, AND DEBRIS THAT MAY IMPAIR THE OPERATION OF THE STORM WATER CONVEYANCE SYSTEM.

5. WHEN LITTORAL ZONE VEGETATION AND SEDIMENT ACCUMULATE TO SUCH AN EXTENT THAT WATER DEPTH DECREASES, THE LITTORAL ZONE MAY NEED TO BE RE—GRADED AND RE—VEGETATED. WHEN IT APPEARS THAT THE POND HAS REACHED THIS STATE, CONTACT THE DEPARTMENT PRIOR TOP LARGE SCALE MAINTENANCE.

6. NOTIFY THE DEPARTMENT AT (813) 632-7600 WITHIN TWENTY-FOUR HOURS OF OBSERVATION OF SINKHOLE DEVELOPMENT IN THE SURFACE WATER MANAGEMENT SYSTEM. REFERENCE PERMIT NUMBER 53-0271437-002.

KEN FRINK, P.E.
REG. ENGINEER NO. 47750
STATE OF FLORIDA
DATE

BURRELL
ENGINEERING, INC.
CIVIL ENGINEERING CA NO. 7973

12005 N. FLORIDA AVE DUNNELLON, FL 34434 PH. 352-489-4144 FAX 352-489-4741

BEI JOB NO. 09-53, FILE NO. K-10, DRAWING NO. Base 09-53, LAYOUT CO-02-104

Revision:	BY:	Date:	Drawn by:
1. REVISED PER FDEP COMMENTS	K.F.	4/28/10	DFS
2. REVISED ELEV. BTM SKIMMER, ADD EXIT'G BERM PER FDEP COMMENTS	D.F.S.	6/03/10	Scale
3. REVISED PER COUNTY COMMENTS	K.F.	7/12/10	NTS
			1412



CONC. WEIR DETAIL

SCALE: N.T.S.

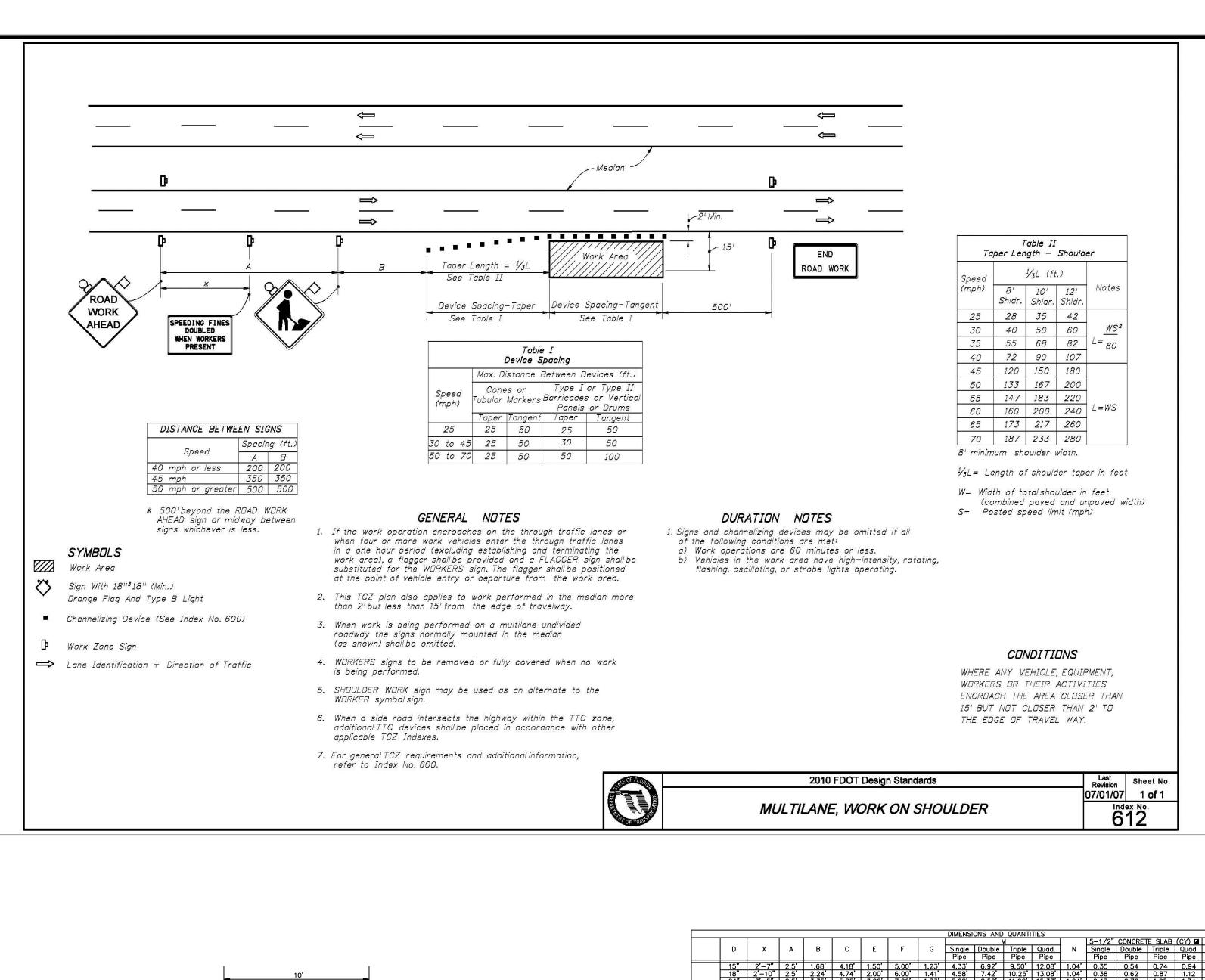
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K. RODRIQUE	KEN FRINK

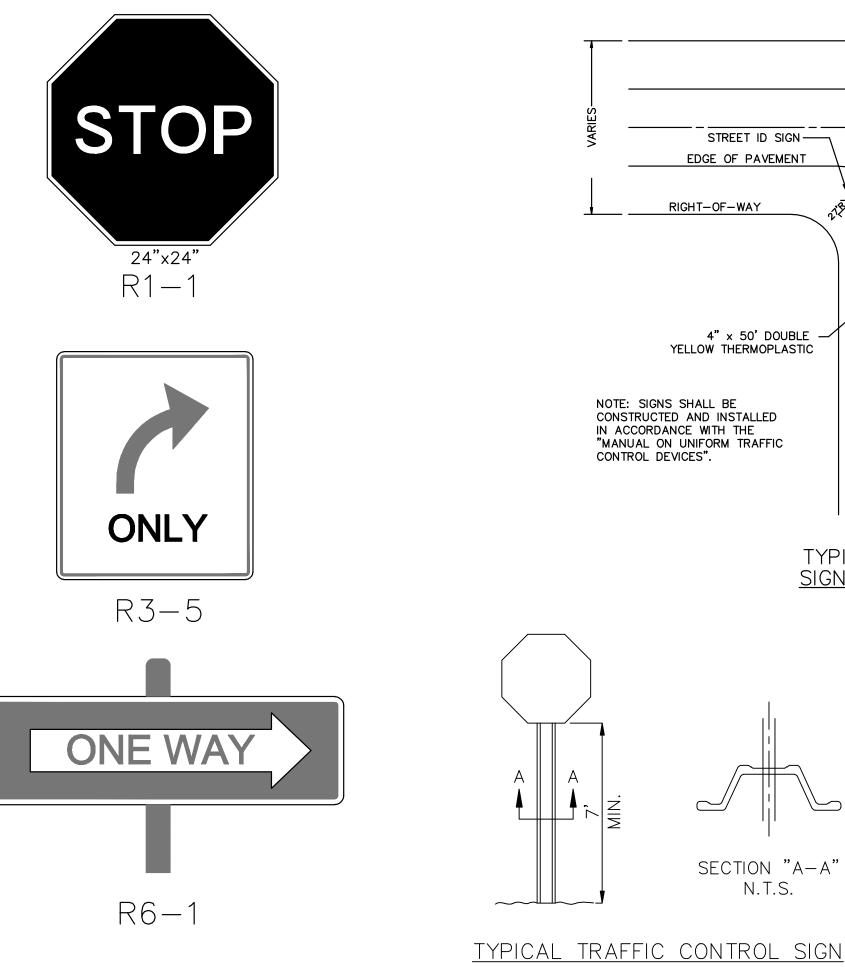
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CIVIL INFORMATION
DRA DETAILS

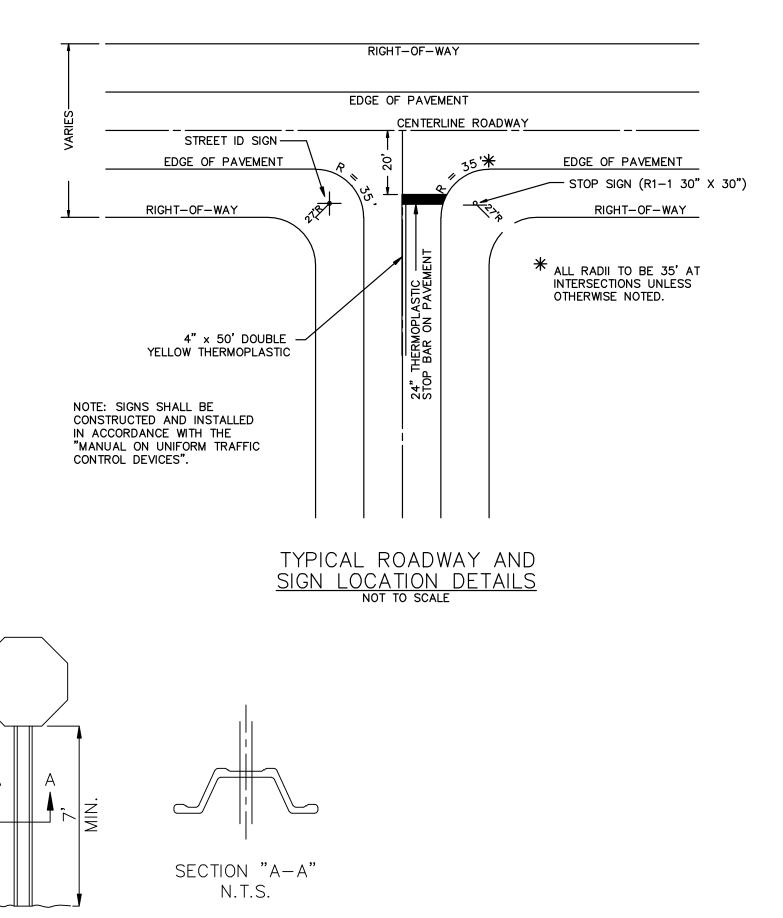
Work Order 900852

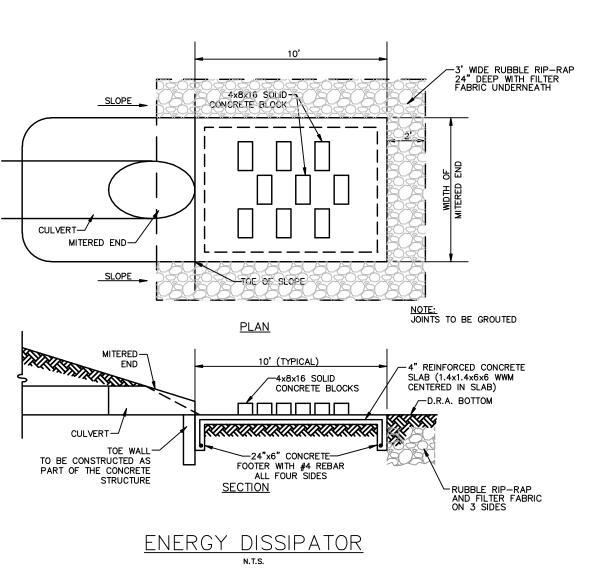
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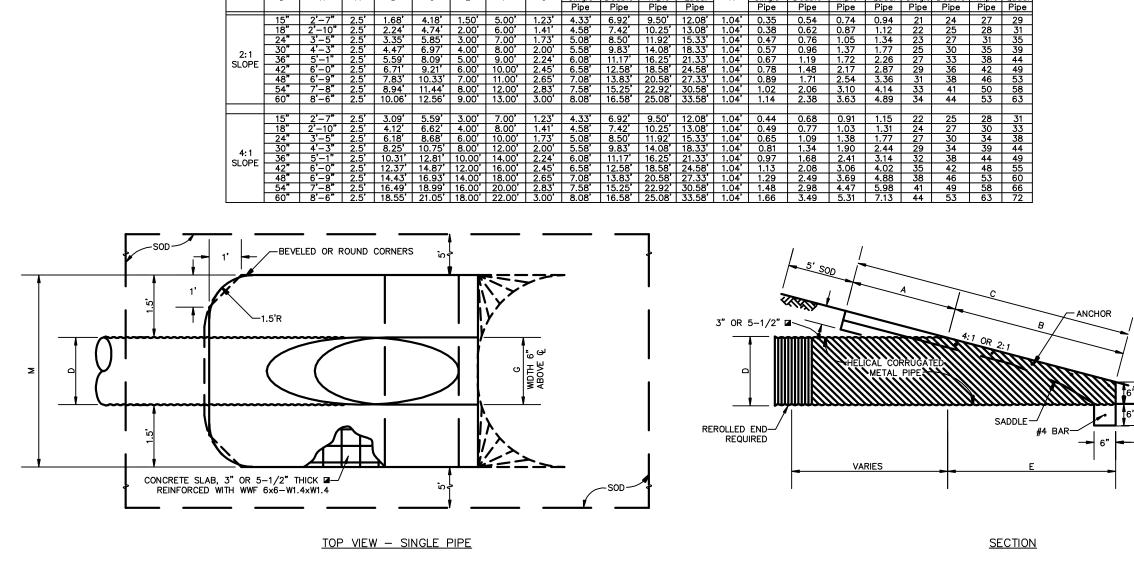


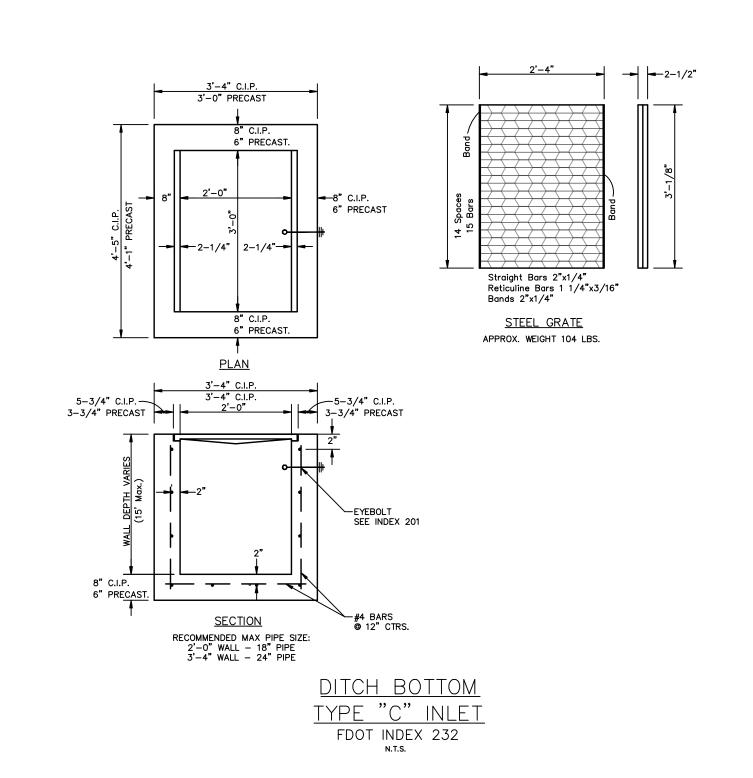












Revision:

1. REVISED PER FDOT COMMENTS

BY: Date: Drawn by: DFS

K.F. 4/8/10

Scale

MITERED END DETAIL

Provided by:

SUMTERVILLE, FLORIDA
FLORIDA 16 SUMTER

Approved Date
03/19/10

Approved By
K. RODRIQUE

Date
MARCH 2010

Engineer
KEN FRINK

CONTINENTAL SUBSTATION
CIVIL INFORMATION
DRAINAGE & SITE
DETAILS

KEN FRINK, P.E.
REG. ENGINEER NO. 47750
STATE OF FLORIDA
DATE _____

Work Order **900852**

Drawing # CO- 02 - 108

SECTION 1

GENERAL REQUIREMENTS

- 1. SCOPE
- WORK UNDER THIS CONTRACT INCLUDES THE FURNISHING OF ALL LABOR, MATERIALS, EQUIPMENT AND INCIDENTALS NECESSARY TO CONSTRUCT THE SITE IMPROVEMENTS AS SHOWN ON THE PLANS AND SPECIFIED HEREIN; COMPLETE, TESTED AND READY FOR SERVICE.
- 2. PRE-CONSTRUCTION MEETING IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO CALL FOR, ARRANGE AND COORDINATE A PRE-CONSTRUCTION CONFERENCE PRIOR TO THE START OF THE PROJECT. THIS MEETING SHALL BE ATTENDED BY REPRESENTATIVES OF THE OWNER, THE ENGINEER, THE CONTRACTOR AND REGULATORY AGENCY REPRESENTATIVES. THE PURPOSE OF THIS MEETING IS TO OUTLINE THE CONSTRUCTION METHODS AND SCHEDULING.
- 3. SAFETY AND HEALTH REGULATIONS THE CONTRACTOR SHALL AT ALL TIMES CONDUCT HIS WORK AS TO INSURE THE LEAST POSSIBLE OBSTRUCTION TO TRAFFIC AND INCONVENIENCE TO THE GENERAL PUBLIC AND THE RESIDENTS IN THE VICINITY OF THE WORK, AND TO PROTECT PERSONS FROM INJURY AND TO AVOID PROPERTY DAMAGE. ADEQUATE LIGHTING, SIGNS, BARRICADES AND GUARDS, AS REQUIRED, SHALL BE PLACED AND MAINTAINED DURING THE PROGRESS OF THE WORK.
 - ALL EQUIPMENT AND MATERIALS FURNISHED AND INSTALLED UNDER THIS CONTRACT SHALL COMPLY WITH THE REQUIREMENTS OF THE DEPARTMENT OF LABOR, OCCUPATIONAL SAFETY AND HEALTH STANDARDS, AND OCCUPATIONAL SAFETY AND HEALTH STANDARDS, AND OCCUPATIONAL SAFETY AND HEALTH STANDARDS, AND OCCUPATIONAL SAFETY AND HEALTH REGULATIONS FOR CONSTRUCTION.
- 4. SURVEYS HORIZONTAL AND VERTICAL CONTROL NECESSARY TO LAYOUT THE WORK IN AN ORDERLY WORKMANLIKE MANNER SHALL BE PROVIDED, AS OUTLINED IN THE INVITATION TO BID.

HORIZONTAL CONTROL SHALL CONSIST OF ADEQUATELY MARKED CENTERLINE CONTROL. VERTICAL CONTROL WILL CONSIST OF BENCH MARKS ESTABLISHED WITHIN THE LIMITS OF THE WORK. THE CONTRACTOR SHALL MAINTAIN AND PRESERVE ALL STAKES AND MARKS ESTABLISHED AND SHOULD SUCH STAKES OR MARKS BE DESTROYED OR DAMAGED, SAID STAKES OR MARKS SHALL BE REPLACED AT THE EXPENSE OF THE CONTRACTOR.

- SUBSURFACE INFORMATION WHEN SOIL BORINGS ARE TAKEN BY THE ENGINEER THEY WILL BE MADE AVAILABLE UPON REQUEST.
- EXISTING UTILITY LOCATION EXISTING UTILITIES AND FACILITIES ARE SHOWN ON THE DRAWINGS ONLY FOR THE CONVENIENCE OF ALL PARTIES CONCERNED AND WERE ESTABLISHED WITHOUT GUARANTEE AS TO THEIR ACCURACY OR COMPLETENESS OR LOCATION. PRIOR TO PERFORMING ANY WORK, THE CONTRACTOR SHALL DETERMINE, BY SITE INSPECTION OR OTHERWISE, ALL PERTINENT DATA CONCERNING THE EXISTING UTILITIES, STRUCTURES, AND FACILITIES, INCLUDING THE REQUEST TO EACH UTILITY AGENCY TO ADVISE HIM OF THE LOCATION OF THEIR FACILITIES IN THE WORK VICINITY

THE CONTRACTOR SHALL BE COMPLETELY RESPONSIBLE FOR THE RELOCATION, AS REQUIRED, OF EXISTING UTILITIES AND STRUCTURES WITH SUCH WORK ACCOMPLISHED AT NO ADDITIONAL COST TO THE OWNER. THE OWNER AND ENGINEER WILL ASSUME NO LIABILITY FOR DAMAGES SUSTAINED OR COSTS INCURRED BECAUSE OF THE CONTRACTOR'S OPERATIONS IN THE VICINITY OF EXISTING UTILITIES OR STRUCTURES. THE CONTRACTOR SHALL SCHEDULE HIS WORK IN SUCH A MANNER THAT HE IS NOT DELAYED BY THE UTILITY COMPANIES RELOCATING OR SUPPORTING THEIR UTILITIES. NO COMPENSATION SHALL BE MADE EDG SUCH LOSS OF THE

ALL OVERHEAD, SURFACE, OR UNDERGROUND STRUCTURES ENCOUNTERED IN TRENCHING, WHETHER SHOWN ON THE PLANS OR NOT SHOWN ON THE PLANS, ARE TO BE CAREFULLY PROTECTED FROM INJURY OR DISPLACEMENT, AND ALL DAMAGE TO SUCH STRUCTURES IS TO BE COMPLETELY REPAIRED WITHIN A REASONABLE TIME; OTHERWISE, THE ENGINEER MAY GIVE TWENTY—FOUR HOURS NOTICE TO THE CONTRACTOR, THEN REPAIR THE DAMAGE AT THE CONTRACTOR'S EXPENSE. ALL SUCH REPAIRS MADE BY THE CONTRACTOR ARE TO BE MADE TO THE SATISFACTION OF THE ENGINEER; ALL DAMAGED PIPES MUST BE REPLACED OR PREVENTED FROM LEAKING. ALSO, ALL SUCH REPAIRS ARE TO BE INSPECTED BY THE ENGINEER PRIOR TO BACKFILLING.

THE CONTRACTOR MUST CAREFULLY PROTECT FROM DISTURBANCE OR INJURY, ALL MONUMENTS, STAKES, AND BENCH MARKS, AND SHALL NOT EXCAVATE NEARER THAN FIVE FEET TO ANY OF THEM UNTIL THEY HAVE BEEN REMOVED, WITNESSED OR OTHERWISE DISPOSED OF BY THE

- 7. SALVAGED MATERIAL UNLESS OTHERWISE STATED HEREIN OR NOTED ON THE DRAWINGS, ALL MATERIALS SALVAGED UNDER THIS CONTRACT SHALL BECOME THE PROPERTY OF THE OWNER. SALVAGED MATERIALS MAY NOT BE REUSED IN THE WORK EXCEPT UPON WRITTEN APPROVAL OF THE ENGINEER. ALL SALVAGED MATERIALS NOT REUSED SHALL BE TURNED OVER TO THE OWNER OR REMOVED FROM THE SITE OF WORK.
- 8. ELECTRICITY ALL ELECTRIC CURRENT REQUIRED BY THE CONTRACTOR SHALL BE FURNISHED AT HIS OWN EXPENSE. ALL TEMPORARY CONNECTIONS FOR ELECTRICITY SHALL BE SUBJECT TO THE APPROVAL OF THE ENGINEER. IN THE EVENT THE ELECTRICITY IS MADE AVAILABLE BY THE OWNER, THE CONTRACTOR SHALL AT HIS OWN EXPENSE, INSTALL A METER TO DETERMINE THE AMOUNT OF CURRENT USED BY HIM AND SUCH ELECTRICITY WILL BE PAID FOR BY, OR CHARGED TO THE CONTRACTOR AT PREVAILING RATES OR AT REASONABLE RATES AS DETERMINED BY THE ENGINEER. ALL TEMPORARY LINES WILL BE FURNISHED, IN—STALLED, CONNECTED AND MAINTAINED BY THE CONTRACTOR IN A WORKMANLIKE MANNER, SATISFACTORY TO THE ENGINEER AND SHALL BE REMOVED BY THE CONTRACTOR IN LIKE MANNER AT HIS EXPENSE PRIOR TO COMPLETION OF THE CONSTRUCTION.
- MATERIAL APPROVAL AND SHOP DRAWINGS ALL MATERIALS FURNISHED BY THE CONTRACTOR SHALL BE NEW AND AS SPECIFIED AND SHOWN ON THE DRAWINGS. THE CONTRACTOR SHALL, IF REQUIRED, FURNISH SATISFACTORY EVIDENCE FOR THE APPROVAL OF THE ENGINEER, AS TO THE KIND AND QUALITY OF MATERIALS. BEFORE BEGINNING WORK, THE CONTRACTOR SHALL ADVISE AND SHALL OBTAIN THE APPROVAL OF THE ENGINEER, IN WRITING, FOR ANY OPTIONAL MATERIALS ALLOWABLE UNDER THE VARIOUS HEADINGS, WHICH HE PROPOSED TO USE. ALL EQUIPMENT SHALL BE INSTALLED IN COMPLETE ACCORD WITH THE MANUFACTURER'S RECOMMENDATIONS.
 - THE CONTRACTOR SHALL SUBMIT FOR THE APPROVAL OF THE ENGINEER, PRIOR TO START OF CONSTRUCTION, DETAILED OR SHOP DRAWINGS OF EQUIPMENT AND MATERIALS HE CONTEMPLATES FURNISHING UNDER THIS CONTRACT. EQUIPMENT SHALL NOT BE FABRICATED OR MATERIALS SHIPPED UNTIL SHOP DRAWINGS AND MATERIAL SUBMITTALS HAVE BEEN APPROVED. FIVE (5) COPIES OF SHOP DRAWINGS AND MATERIAL SUBMITTALS SHALL BE SUBMITTED. SHOP DRAWINGS AND MATERIAL SUBMITTALS SHALL BE CHECKED, SIGNED, DATED AND STAMPED BY THE CONTRACTOR BEFORE SUBMISSION TO THE ENGINEER.
- 10. MOBILIZATION THE WORK SPECIFIED IN THIS SECTION CONSISTS OF THE PREPARATORY WORK AND OPERATIONS IN MOBILIZING FOR BEGINNING WORK ON THE PROJECT, BUT NOT LIMITED TO, THOSE OPERATIONS NECESSARY FOR THE MOVEMENT OF PERSONNEL, EQUIPMENT, SUPPLIES AND INCIDENTALS TO THE PROJECT SITE, AND FOR THE ESTABLISHMENT OF TEMPORARY OFFICES, BUILDINGS, SAFETY EQUIPMENT AND FIRST AID SUPPLIES, SANITARY AND OTHER PROVISIONS AS REQUIRED BY THESE SPECIFICATIONS AND LOCAL AND STATE LAWS AND REGULATIONS. THE COSTS OF INSURANCE AND ANY OTHER PRECONSTRUCTION EXPENSE NECESSARY FOR THE START OF THE WORK, EXCLUDING ANY CONSTRUCTION MATERIALS, SHALL BE INCLUDED.
- 11. SPECIAL CONSIDERATIONS ALL WORK UNDER THIS CONTRACT SHALL BE PERFORMED WITH MINIMAL INTERRUPTION OF THE SURROUNDING COMMUNITY. WHERE IT IS NECESSARY TO MAKE CONNECTIONS TO OR CHANGES IN EXISTING FACILITIES, THE REQUIRED INTERRUPTION SHALL BE KEPT TO A MINIMUM.

ALL CONSTRUCTION COVERED BY THESE PLANS SHALL COMPLY WITH THE MATERIAL REQUIREMENTS AND QUALITY CONTROL STANDARDS CONTAINED IN THE SUMTER COUNTY LAND DEVELOPMENT CODE.

- 12. TRAFFIC REGULATION
- A. GENERAL THE WORK UNDER THIS CONTRACT SHALL BE IN STRICT ACCORDANCE WITH THE FOLLOWING CODES AND STANDARDS: (1) LOCAL, COUNTY AND MUNICIPAL CODES.
- (2) FLORIDA DEPARTMENT OF TRANSPORTATION SPECIFICATIONS B. TRAFFIC AND VEHICULAR ACCESS
- EMERGENCY VEHICLES: NO MULTI-FAMILY RESIDENCE, APARTMENT, COMMERCIAL BUILDING OR PLACE OF EMPLOYMENT SHALL BE WITHOUT ACCESS TO EMERGENCY VEHICLES FOR A PERIOD LONGER THAN THREE HOURS. THE CONTRACTOR SHALL NOTIFY IN WRITING THE ENGINEER, THE POLICE, FIRE AND OTHER EMERGENCY DEPARTMENTS AND AGENCIES WHEN AND WHERE WORK IS TO BE ACCOMPLISHED THAT WILL AFFECT THEIR OPERATIONS AT LEAST TWO DAYS IN ADVANCE OF SUCH WORK.
- MAJOR ROADS AND STREETS: NO MAJOR ROADS OR STREETS SHALL BE BLOCKED TO TRAFFIC WITHOUT ADEQUATE DETOUR FACILITIES FOR A PERIOD OF MORE THAN 30 MINUTES OR AS DIRECTED BY THE GOVERNING
- C. CONSTRUCTION IN STATE HIGHWAY RIGHT-OF-WAY CONSTRUCTION WITHIN ALL STATE HIGHWAY RIGHT—OF—WAY SHALL BE MADE IN FULL COMPLIANCE WITH ALL REQUIREMENTS AND TO THE SATISFACTION OF THE FLORIDA DEPARTMENT OF TRANSPORTATION. AL NECESSARY BARRICADES, DETOURS, LIGHTS AND OTHER PROTECTIVE MEASURES SHALL BE PROVIDED FOR THE PROTECTION OF BOTH PEDESTRIAN AND VEHICULAR TRAFFIC.
- D. CONSTRUCTION IN OTHER THAN STATE HIGHWAY RIGHT-OF-WAY CONSTRUCTION WITHIN RIGHT—OF—WAY OTHER THAN STATE HIGHWAY SHALL BE MADE IN FULL COMPLIANCE WITH ALL REQUIREMENTS FLORIDA DEPARTMENT OF TRANSPORTATION AND TO THE SATISFACTION OF THE OF THE LOCAL GOVERNING BODIES. ALL NECESSARY BARRICADES, DETOURS, LIGHTS AND OTHER PROTECTIVE MEASURES SHALL BE PROVIDED FOR THE PROTECTION OF BOTH PEDESTRIAN AND VEHICULAR TRAFFIC
- 13. SITE AND MISCELLANEOUS RESTORATION THE CONTRACTOR SHALL REPAIR AND REPLACE ALL EXISTING STRUCTURES, PAVEMENT, DRIVEWAYS, PAVED AREAS, CURBS AND GUTTERS, SIDEWALKS, SHRUBBERY, GRASS, TREES, UTILITY POLES, UTILITY PIPELINES, CONDUITS, CABLES, DRAINS, CATCH BASINS, FLAGSTONES, ROCKED, GRAVELED OR STABILIZED AREAS OR DRIVEWAYS AND INCLUDING ALL UNDERGROUND OBSTRUCTIONS NOT SPECIFICALLY NAMED HEREIN WHICH MAY BE DAMAGED OR DESTROYED AS A RESULT OF CONSTRUCTION OPERATIONS UNDER THIS CONTRACT. THIS ITEM SHALL BE INCLUDED IN THE BID.
- 14. PAVEMENT RESTORATION THE CONTRACTOR SHALL REPAIR OR REPLACE ALL PAVEMENT OR PARTIAL PAVEMENT DAMAGED OR DESTROYED DURING OR AS A RESULT OF CONSTRUCTION OPERATIONS UNDER THIS CONTRACT. THE REPAIR OR REPLACEMENT SHALL BE EQUAL TO OR BETTER THAN THE CONDITION OF THE PAVEMENT EXISTING AT THE TIME OF BIDDING AND SHALL BE REQUIRED TO MATCH THE ORIGINAL SURFACE MATERIAL AND ORIGINAL GRADE UNLESS OTHERWISE SPECIFIED OR SHOWN ON THE PLANS. THE REPAIR SHALL CONFORM TO APPLICABLE CITY, COUNTY, OR STATE REQUIREMENTS FOR PAVEMENT REPAIR.

ALL PIPE CROSSING UNDER STATE OR COUNTY HIGHWAYS OR WITHIN THE HIGHWAY RIGHT—OF—WAY SHALL BE INSTALLED IN ACCORDANCE WITH THE STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION (D.O.T.) REQUIREMENTS. THE D.O.T. WILL GOVERN THE METHOD AND MATERIALS OF CONSTRUCTION UNLESS OTHERWISE NOTED. THE CONTRACTOR WILL BE HELD RESPONSIBLE FOR ANY AND ALL EXPENSE THE D.O.T. INCURS IN PROTECTING ITS HIGHWAY WHILE PIPES ARE BEING PLACED UNDER SAME, AND FOR ANY DAMAGE TO THE HIGHWAY. THE CONTRACTOR SHALL ARRANGE WITH THE D.O.T. FOR THE PROPER BRACING, SHORING AND OTHER NECESSARY PROTECTION OF THE HIGHWAY BEFORE EXCAVATION BENEATH ANY OF SAID HIGHWAY.

- 15. TESTS THE CONTRACTOR SHALL PAY FOR ALL REQUIRED TESTS, UNLESS OTHERWISE SPECIFIED. GENERALLY, TESTS WILL BE COMPACTION AND DENSITY TESTS, LIMEROCK QUALITY TESTS AND CONCRETE QUALITY TESTS (CYLINDER BREAKS) OR MARSHALL STABILITY. ON ASPHALTIC CONCRETE, THE MANUFACTURER'S OR SUPPLIER'S CERTIFICATE THAT THE MATERIAL MEETS THE REQUIREMENTS OF THE SPECIFICATIONS WILL BE ACCEPTED SUBJECT TO VERIFICATION BY OWNER'S ENGINEER OF TEST METHODS USED.
- 16. CLEAN-UP THE CONTRACTOR SHALL KEEP THE CONSTRUCTION SITE FREE OF RUBBISH AND WASTE MATERIALS AND RESTORE TO THEIR ORIGINAL CONDITIONS THOSE PORTIONS OF THE SITE NOT DESIGNATED FOR ALTERATIONS BY THE CONTRACT DOCUMENTS. CLEAN—UP AND RESTORATION SHALL BE ACCOMPLISHED ON A CONTINUING BASIS THROUGHOUT THE CONTRACT PERIOD IN SUCH A MANNER AS TO MAINTAIN A MINIMUM OF NUISANCE AND INTERFERENCE TO THE RESIDENTS AND WORKERS IN THE AREA. THE CONTRACTOR SHALL ALSO REMOVE, WHEN NO LONGER NEEDED, ALL TEMPORARY STRUCTURES AND EQUIPMENT USED IN HIS OPERATIONS. IT IS THE INTENT OF THIS SPECIFICATION THAT THE CONSTRUCTION AREA OF THOSE OTHER AREAS NOT DESIGNATED FOR ALTERATION BY THE CONTRACT DOCUMENTS SHALL BE RESTORED TO AN EQUAL OR BETTER CONDITION THAN ORIGINALLY EXISTED. THE CONTRACTOR SHALL KEEP THE CONSTRUCTION SITE FREE OF RUBBISH

ALL BACKFILLING, COMPACTION, SEEDING AND MULCHING SHALL BE MADE IN ACCORDANCE WITH APPLICABLE CITY, COUNTY AND STATE REQUIREMENTS FOR REPLACEMENT OR REPAIR.

- 17. RECORD DRAWINGS THE CONTRACTOR SHALL MAINTAIN DURING THE PROGRESS OF THE PROJECT ACCURATE RECORDS OF THE LOCATION, LENGTH AND ELEVATION OF ALL PIPELINES AND PIPING INSTALLED AND OF ALL FEATURES OF THE CONTRACT. A SET OF DRAWINGS WILL BE PROVIDED TO THE CONTRACTOR TO BE KEPT AT THE JOB SITE FOR THIS PURPOSE. PROMPTLY AFTER COMPLETION OF ANY PORTION OF THE WORK PROVIDED, AS PAID FOR IN THIS CONTRACT, THE CONTRACTOR SHALL DELIVER TO THE ENGINEER THE DRAWING WITH ACCURATE NOTATIONS RECORDED THEREON AS NECESSARY TO REVISE THE DRAWINGS TO AN AS—BUILT CONDITION. INFORMATION TO BE SHOWN FOR PIPELINES SHALL INCLUDE THE LOCATION OF VALVES, FITTINGS, AND LATERALS DIMENSIONED TO THE NEAREST PERMANENT OBJECT OR MONUMENT, INCLUDING BUT NOT LIMITED TO, LENGTHS, DEPTHS AND OFFSETS OF LATERALS. THE CONTRACTOR SHALL ALSO RECORD THE ACTUAL SEPARATION BETWEEN WATER MAIN AND SANITARY SEWER OR STORM SEWER MAIN WHEN THE CLEAR SEPARATION IS LESS THAN 18". THE CONTRACTOR WILL BE HELD RESPONSIBLE FOR THE ACCURACY OF SUCH DATA AND SHALL BEAR ANY COSTS INCURRED IN FINDING UTILITIES AS A RESULT OF INCORRECT DATA FURNISHED BY HIM.
 - THE PROJECT SHALL NOT BE CONSIDERED TO BE IN SUBSTANTIAL COMPLETION UNTIL RECORD DRAWINGS HAVE BEEN SUBMITTED AND ACCEPTED BY THE ENGINEER. PRIOR TO FINAL PAYMENT THE RECORD DRAWINGS SHALL BE REVISED BY THE CONTRACTOR TO REFLECT ANY CHANGES WHICH HAVE OCCURRED SINCE THE SUBSTANTIAL COMPLETION SUBMITTAL.
- 18. BASIS OF PAYMENT

THE CONTRACTOR SHALL RECEIVE AND ACCEPT COMPENSATION AS OUTLINED IN THE CONTRACT DOCUMENTS AS FULL PAYMENT FOR FURNISHING ALL MATERIALS, LABOR, TOOLS, AND EQUIPMENT AND FOR PERFORMING ALL OPERATIONS NECESSARY TO COMPLETE THE WORK AS OUTLINED IN THE CONTRACT DOCUMENTS, AND ALSO IN FULL PAYMENT FOR ALL LOSS OR DAMAGES ARISING FROM THE NATURE OF THE WORK OR FROM THE ACTION OF THE ELEMENTS, OR FROM ANY UNFORESEEN DIFFICULTIES WHICH MAY BE ENCOUNTERED DURING THE PROSECUTION OF THE WORK UNTIL THE FINAL ACCEPTANCE BY THE OWNER.

THE PRICES STATED IN THE PROPOSAL INCLUDE ALL COSTS AND EXPENSES FOR OVERHEAD, LABOR, EQUIPMENT, MATERIALS, COMMISSIONS, TRANSPORTATION CHARGES AND EXPENSES, PATENT FEES AND ROYALTIES, LABOR FOR HANDLING MATERIALS DURING UNLOADING AND INSPECTION, TOGETHER WITH ANY AND ALL OTHER COSTS AND EXPENSES FOR PERFORMING AND COMPLETING THE WORK AS SHOWN ON THE PLANS AND SPECIFIED HEREIN. THE BASIS OF PAYMENT FOR AN ITEM AT THE UNIT PRICE SHOWN IN THE PROPOSAL SHALL BE IN ACCORDANCE WITH THE DESCRIPTION OF THAT ITEM AND SHALL BE USED FOR PURPOSES OF DETERMINING PROGRESS PAYMENTS TO THE FOR PURPOSES OF DETERMINING PROGRESS PAYMENTS TO THE CONTRACTOR.

THE CONTRACTOR'S ATTENTION IS AGAIN CALLED TO THE FACT THAT THE QUOTATIONS FOR THE VARIOUS ITEMS OF WORK ARE INTENDED TO ESTABLISH A TOTAL COST FOR COMPLETING THE WORK IN ITS ENTIRETY. SHOULD THE CONTRACTOR FEEL THAT THE COST OF ANY ENTIRETY. SHOULD THE CONTRACTOR FEEL THAT THE COST OF ANY ITEM OF WORK HAS NOT BEEN ESTABLISHED BY THE BID FORM FOR BASIS OF PAYMENT, HE SHALL INCLUDE THE COST FOR THE WORK IN SOME OTHER APPLICABLE BID ITEM OR THAT ITEM MAY BE HANDWRITTEN INTO THE BID FORM SO HIS PROPOSAL FOR THE PROJECT DOES REFLECT HIS TOTAL COST FOR COMPLETING THE WORK IN ITS ENTIRETY.

SECTION 2

- SPECIFICATIONS FOR SITE WORK
- THE ENGINEER SHALL BE NOTIFIED IN WRITING OF THE PROPOSED DATE OF THE BEGINNING OF CONSTRUCTION OF THE SITE IMPROVEMENTS.

 ANY TIME THAT WORK IS TO STOP FOR A PERIOD OF TIME IN EXCESS OF TWO (2) WORKING DAYS, THE OWNER SHALL BE NOTIFIED OF SUCH
- THE CONTRACTOR SHALL PROVIDE DOWNSTREAM SILTATION PROTECTION DURING CONSTRUCTION. IN THE EVENT SUCH PROTECTION IS INADEQUATE, THE CONTRACTOR SHALL REMOVE ANY DOWNSTREAM SILTATION PRIOR TO THE TIME OF FINAL INSPECTION.
- CERTIFICATES OF COMPLIANCE WITH THE SPECIFICATIONS FURNISHED BY THE MATERIAL SUPPLIER SHALL BE SUBMITTED ON ALL MATERIALS USED IN THE COMPLETION OF THIS WORK. ALL PRIVATE AND PUBLIC PROPERTY AFFECTED BY THIS WORK SHALL BE RESTORED TO A CONDITION EQUAL TO OR BETTER THAN EXISTED BEFORE COMMENCING CONSTRUCTION WORK, UNLESS SPECIFICALLY EXEMPTED BY THE PLANS. COST TO BE INCIDENTAL TO OTHER CONSTRUCTION AND NO EXTRA COMPENSATION TO BE ALLOWED.
- ALL AREAS DESIGNATED TO RECEIVE STRUCTURAL FILL SHALL BE PROOFROLLED USING A LARGE VIBRATORY ROLLER (DYNAPAC CA-25 OR EQUIVALENT). PROOFROLLING OF THIS AREA SHALL CONSIST OF TWELVE (12) OVERLAPPING PASSES IN EACH OF TWO (2) PERPENDICULAR DIRECTIONS. THIS PROCESS SHALL BE REVIEWED AND INSPECTED BY THE PROJECT ENGINEER. ANY MATERIALS WHICH YIELD EXCESSIVELY DURING THE PROOFROLLING SHALL BE UNDERCUT AND REPLACED WITH WELL-COMPACTED STRUCTURAL FILL.
- ALL SUBGRADES RECEIVING FILL SHALL BE COMPACTED TO A MINIMUM NINETY—FIVE PERCENT (95%) OF THE SOILS MODIFIED PROCTOR MAXIMUM DRY DENSITY (ASTM D-1557) FOR A DEPTH OF TWELVE
- ALL STRUCTURAL FILL SHALL CONSIST OF INORGANIC, NON-PLASTIC GRANULAR SOIL WHICH CONTAINS LESS THAN TEN PERCENT (10%) FINES PASSING THE NO. 200 SIEVE (CLEAN SAND). ALL FILL MATERIAL SHALL BE PLACED IN LEVELS NOT TO EXCEED TWELVE (12) INCHES. COMPACTION SHALL CONTINUE UNTIL THE SOIL AT TWELVE (12) INCHES BELOW THE COMPACTION SURFACE ATTAINS A MINIMUM DENSITY OF NINETY-FIVE PERCENT (95%) OF THE MAXIMUM MODIFIED PROCTOR DENSITY (ASTM D-1557).
- CONTRACTOR SHALL INSTALL TEMPORARY RETENTION PONDS, SWALES AND/OR BERMS NECESSARY TO PREVENT DISCHARGE OF STORMWATER RUNOFF FROM THE SITE DURING CONSTRUCTION.
- UTILITY CONTACTS CONTRACTOR TO CONTACT TELEPHONE COMPANY PRIOR TO AND DURING CONSTRUCTION FOR LINE RELOCATION, PROTECTION, AND SLEEVE INSTALLATION WHERE NEEDED.
 - CONTRACTOR TO CONTACT POWER COMPANY PRIOR TO AND DURING CONSTRUCTION FOR LINE RELOCATION, PROTECTION AND SLEEVE INSTALLATION WHERE NEEDED.
- CONTRACTOR TO CONTACT CABLE COMPANY PRIOR TO AND DURING CONSTRUCTION FOR LINE RELOCATION, PROTECTION AND SLEEVE INSTALLATION WHERE NEEDED. CONTRACTOR TO CONTACT GAS COMPANY PRIOR TO AND DURING CONSTRUCTION FOR LINE RELOCATION, PROTECTION AND SLEEVE INSTALLATION WHERE NEEDED.
- THE CONTRACTOR WILL BE EXPECTED TO MEET ALL REQUIREMENTS OF THE APPLICABLE REGULATORY AGENCY INCLUDING A FORTY—EIGHT (48) HOUR ADVANCE NOTIFICATION TO THE APPLICABLE REGULATORY AGENCY AND THE ENGINEER SO THAT THEY CAN WITNESS ALL REQUIRED TESTS.

SECTION 3

- SITE GRADING, PAVING AND DRAINAGE
- 1. SITE GRADING
- THE SITE SHALL BE BROUGHT TO THE ELEVATIONS SHOWN ON THE DRAWINGS. IF THERE IS EXCESS EXCAVATION IT SHALL BE SPREAD ON SITE AS DIRECTED BY THE ENGINEER. ALL AREAS DISTURBED BY CONSTRUCTION SHALL BE SODDED.
- 2. ROADWAY EARTHWORK
- EARTHWORK FOR ROADS SHALL CONFORM TO THE PROVISIONS OF SECTION 120 OF THE FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, 3. WATER RETENTION AREAS
- WATER RETENTION AREAS SHALL BE CONSTRUCTED TO THE LINES AND PAVING WORK
- A. SCOPE THE WORK SPECIFIED IN THIS SECTION CONSISTS OF FURNISHING ALL LABOR, EQUIPMENT, AND MATERIALS REQUIRED TO CONSTRUCT A STABILIZED SUBGRADE, A LIMEROCK BASE AND ASPHALT SURFACE COURSE, AS SPECIFIED HEREIN AND IN CONFORMITY WITH THE LINES, GRADES, NOTES, AND TYPICAL CROSS—SECTIONS SHOWN ON THE DRAWINGS.
- B. PAVING
 - (1) STABILIZED SUBGRADE A SUBGRADE OF THICKNESS AND TYPE AS SHOWN ON THE DRAWING SHALL BE CONSTRUCTED AND COMPACTED, AS NECESSARY, TO OBTAIN NO LESS THAN NINETY—EIGHT (98%) PERCENT OF THE MAXIMUM DENSITY AS OBTAINED BY AASHTO METHOD T—180 AND A LIMEROCK BEARING RATIO OF 40. THE WORK SHALL COMPLY WITH SECTION 160 OF THE FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, LATEST REVISION. STABILIZATION MATERIAL, IF REQUIRED, SHALL BE BROUGHT IN TO COMPLETE THE STABILIZATION AND PAID FOR BY THE CONTRACTOR. SUBGRADE SHALL HAVE ALL UNSUITABLE MATERIAL REMOVED TO A DEPTH OF 2 FEET BELOW TOP OF SUBGRADE AND 3 FEET BEYOND BACK OF CURB OR EDGE OF PAVEMENT. SUITABLE MATERIAL IS DEFINED AS NON—PLASTIC, INORGANIC, GRANULAR SOIL CONTAINING LESS THAN 10 PERCENT MATERIAL PASSING THE NO. 200 MESH SIEVE (I.E., RELATIVELY CLEAN FINE SAND). NO. 200 MESH SIEVE (I.E., RELATIVELY CLEAN FINE SAND).
 - (2) LIMEROCK BASE A LIMEROCK BASE OF THICKNESS AND TYPE AS SHOWN ON THE DRAWINGS SHALL BE CONSTRUCTED ON THE PREPARED SUBGRADE IN ACCORDANCE WITH THE PROVISIONS OF SECTION 200 OF THE FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, LATEST REVISION. COMPACTION SHALL NOT BE LESS THAT 98% OF MAXIMUM DENSITY AS OBTAINED BY AASHTO METHOD OF TEST T—180 AND A LBR OF 100.
 - (3) PRIME AND TACK COATS FOR BASE COURSE A PRIME AND TACK COAT OF BITUMINOUS MATERIAL SHALL BE APPLIED TO THE PREPARED LIMEROCK BASE IN ACCORDANCE WITH THE PROVISIONS OF SECTION 300 OF THE FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, LATEST REVISION.
 - (4) SURFACE COURSE AN ASPHALTIC CONCRETE SURFACE COURSE OF THICKNESS AND TYPE AS SHOWN ON THE DRAWING SHALL BE CONSTRUCTED ON THE PREPARED BASE IN ACCORDANCE WITH THE PROVISIONS OF THE APPLICABLE SECTION(S) OF THE FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, LATEST REVISION.
 - THE FINISHED SURFACE SHALL BE SUCH THAT IT WILL NOT VARY MORE THAN 3/16 INCH FROM A 15 FOOT STRAIGHTEDGE APPLIED PARALLEL TO THE CENTERLINE OF THE PAVEMENT. ANY IRREGULARITIES OF THE SURFACE EXCEEDING THE ABOVE LIMITS SHALL BE CORRECTED AT THE CONTRACTORS EXPENSE.

- (5) ASPHALT RESURFACING
- AN ASPHALTIC CONCRETE SURFACE COURSE OF THICKNESS AND TYPE AS SHOWN ON THE DRAWING SHALL BE CONSTRUCTED ON THE EXISTING SURFACE IN ACCORDANCE WITH THE PROVISIONS OF THE APPLICABLE SECTION(S) OF THE FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, LATEST PEVISION.
- WHERE THE EXISTING SURFACE IS IRREGULAR THE EXISTING SURFACE SHALL BE BROUGHT TO PROPER GRADE AND CROSS SECTION BY THE APPLICATION OF PATCHING OR LEVELING COURSES.
- (6) GRAVEL GRAVEL SHALL BE COMPOSED OF # 57 WASHED
- THE CONTRACTOR SHALL PROVIDE LABORATORY TESTS AND/OR FIELD MEASUREMENTS FOR THE FOLLOWING:
- (a) SUBGRADE DEPTH, DENSITY AND LIMEROCK BEARING RATIO.
- DEPTH, DENSITY AND LIMEROCK BEARING RATIO. (c) SURFACE
- WIDTH, DEPTH, EXTRACTION AND STABILITY. (d) LOT FILL
- STRUCTURAL FILL AREA IN PROPOSED LOTS SHALL OBTAIN DENSITY TESTS ON AT LEAST EVERY THIRD LOT.
- THE FREQUENCY OF THESE TESTS SHALL CONFORM TO THE SUMTER COUNTY LAND DEVELOPMENT CODE.
- 5. CONCRETE STRUCTURES
 - A. CONCRETE CONCRETE FOR ALL STRUCTURES SHALL HAVE A COMPRESSIVE CONCRETE FOR ALL STRUCTURES SHALL HAVE A COMPRESSIVE STRENGTH OF AT LEAST 4,000 PSI AT TWENTY—EIGHT (28) DAYS, AS MEASURED BY THE STANDARD SIX (6) INCH TEST CYLINDER AND SHALL CONFORM TO THE PROVISIONS OF SECTION 400 OF THE FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, LATEST REVISION, EXCEPT THAT READY—MIX CONCRETE CONFORMING TO THE PROVISIONS OF SECTION 345 OF THE SAME SPECIFICATIONS MAY BE USED, UNLESS OTHERWISE SPECIFIED ON THE PLANS.
 - B. REINFORCING STEEL REINFORCING STEEL USED IN CONCRETE STRUCTURES SHALL CONFORM TO THE PROVISIONS OF SECTION 415 OF THE FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, LATEST REVISION.
- CURB WORK
- ALL CONCRETE GUTTERS AND CURB ELEMENTS SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTION 520 OF THE FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, LATEST REVISION, AND IN ACCORDANCE WITH THE LINES AND GRADE AS SHOWN ON THE DESIGNATED PLANS.
- 7. STORM DRAINAGE
 - THE WORK SPECIFIED IN THIS SECTION CONSISTS OF FURNISHING ALL LABOR, EQUIPMENT, AND MATERIALS REQUIRED TO CONSTRUCT STORM INLETS, STORM SEWERS, AND CULVERTS, AS SPECIFIED HEREIN AND IN CONFORMITY WITH THE LINES, GRADES, NOTES AND TYPICAL CROSS—SECTION SHOWN ON THE DRAWINGS.
 - B. CATCH BASINS CATCH BASINS FOR THE STORM DRAINAGE SYSTEM SHALL BE CATCH BASINS FOR THE STORM DRAINAGE SYSTEM SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 425 OF THE FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, LATEST REVISION, EXCEPT THAT THE CONCRETE COMPRESSIVE STRENGTH SHALL BE AT LEAST 4000 psi.
 - C. STORM SEWER
 - REINFORCED CONCRETE PIPE SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 430 OF THE FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, LATEST REVISION. ALL RCP PIPE SHALL BE CLASS II OR BETTER
 - (2) BITUMINOUS COATED CORRUGATED METAL PIPE SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 430 OF THE FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, LATEST REVISION. PIPE THICKNESS SHALL MEET THE REQUIREMENTS OF SECTION 943 OF THE FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD
 - (3) ALUMINUMIZED PIPE SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 430 OF THE FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, LATEST REVISION. PIPE THICKNESS SHALL BE BASED ON FLORIDA DEPARTMENT OF TRANSPORTATION INDEX 205, LATEST REVISION.
 - (4) PVC STORM PIPE SHALL BE PERMA-LOC LARGE DIAMETER PVC STORM DRAIN MANUFACTURED TO A.A.S.H.T.O. M 304M-91 SPECIFICATIONS.,
 - (5) ALL JOINTS SHALL BE WATER/SOIL TIGHT
- STREET NAME MARKERS STREET MARKERS SHALL MEET FLORIDA DEPARTMENT OF TRANSPORTATION SPECIFICATIONS FOR APPEARANCE AND SHALL BE INSTALLED AS DESIGNATED
- TRAFFIC STRIPES
- TRAFFIC STRIPES SHALL BE DONE AS SHOWN ON THE DRAWINGS, AND IN ACCORDANCE WITH SECTION 711 OF THE FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, LATEST REVISION, AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, INCLUDING AREAS IN FLORIDA DEPARTMENT OF TRANSPORTATION RIGHT—OF—WAY WHERE ALL STRIPING SHALL CONFORM TO SECTION 711 OF SAID DOCUMENT.

SECTION 4 GRASSING AND SODDING MATERIALS

- THE FDOT (FLORIDA DEPARTMENT OF TRANSPORTATION) STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION SECTIONS 570 AND 575, RESPECTIVELY FOR GRASSING AND SODDING WILL APPLY TO ALL SEEDING AND SODDING WORK WITHIN THIS PROJECT.
- ALL AREAS DISTURBED BY CONSTRUCTION SHALL BE SODDED, UNLESS OTHERWISE INDICATED.

BURRELL ENGINEERING, INC. CIVIL ENGINEERING CA No. 7973

Drawn by: **DFS** Scale





Approved Date 03/19/10 **MAR 2010** Approved By Engineer K. RODRIQUE **KEN FRINK** **CONTINENTAL SUBSTATION CIVIL INFORMATION** INSTALLATION **SPECIFICATIONS**

DATE _____ Work Order 900852

KEN FRINK, P.E. REG. ENGINEER NO. STATE OF FLORIDA

Drawing # CO- 02 - 109

12005 N. FLORIDA AVE DUNNELLON, FL 34434 PH. 352-489-4144 FAX 352-489-4741 BEI JOB NO. 09-53, FILE NO. K-10, DRAWING NO. Base 09-53, LAYOUT

SECTION 5

UTILITY EXCAVATION, TRENCHING AND BACKFILLING

THE PROVISIONS SET FORTH IN THIS SECTION SHALL BE APPLICABLE TO ALL UNDERGROUND WATER, SANITARY SEWER, AND STORM SEWER PIPING OR BURIED CONDUIT INSTALLATIONS, REGARDLESS OF LOCATION, UNLESS PRIOR APPROVAL IS RECEIVED FROM THE OWNER AND THE ENGINEER.

2. MATERIALS A. SHEETING AND BRACING

WOOD SHEETING TO BE LEFT IN PLACE SHALL BE PRESSURE TREATED WITH PRESERVATIVE IN ACCORDANCE WITH THE CURRENT REQUIREMENTS OF THE AMERICAN WOOD PRESERVERS ASSOCIATION MANUAL OF RECOMMENDED PRACTICE. THE CREOSOTE OIL USED SHALL CONFORM TO THE REQUIREMENTS OF THE STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION, STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, LATEST REVISION, WHEN TESTED IN ACCORDANCE WITH AASHTO T—60.

STEEL SHEETING TO BE LEFT IN PLACE SHALL BE AS SPECIFIED IN ASTM DESIGNATION A-328.

REQUIRED CONCRETE FOR ANCHORS, THRUST BLOCKS, ENCASEMENTS OR PROTECTIVE SLABS SHALL HAVE A MINIMUM 2,500 POUNDS PER SQUARE INCH (P.S.I.) COMPRESSIVE STRENGTH

3. WORKMANSHIP CONSTRUCTION METHODS

(1) VERTICAL CLEARANCE AT CROSSINGS: GRAVITY SEWERS OR FORCE MAINS CROSSING UNDER WATER MAINS SHALL BE LAID TO PROVIDE A MINIMUM VERTICAL DISTANCE OF 18 INCHES BETWEEN THE INVERT OF THE UPPER PIPE AND THE CROWN OF THE LOWER PIPE. THE CROSSING SHALL BE ARRANGED SO THAT THE SEWER JOINTS AND WATER JOINTS WILL BE EQUIDISTANT FROM THE POINT OF CROSSING WITH NO LESS THAN 10 FEET BETWEEN ANY TWO JOINTS. WHERE THE MINIMUM 18 IN. SEPARATION CANNOT BE OBTAINED, THE WATER MAIN SHALL BE CONSTRUCTED OF DUCTILE IRON PIPE FOR 20 FEET CENTERED ON THE POINT OF CROSSING.

WHERE THERE IS NO ALTERNATIVE TO SEWER PIPES WHERE THERE IS NO ALTERNATIVE TO SEWER PIPES CROSSING OVER WATER MAINS, THE PIPES SHALL BE CENTERED AT THE CROSSING AS INDICATED ABOVE, AND THE WATER MAIN SHALL BE CONSTRUCTED OF DUCTILE IRON PIPE FOR 20 FEET CENTERED ON THE POINT OF CROSSING. ADEQUATE STRUCTURAL SUPPORT SHALL BE PROVIDED FOR THE SEWER TO PREVENT DAMAGE TO THE WATER MAIN.

(2) HORIZONTAL SEPARATION BETWEEN PARALLEL LINES: GRAVITY SEWERS SHALL BE INSTALLED AT LEAST 10 FEET HORIZONTALLY FROM ANY EXISTING OR PROPOSED WATER MAIN. THE DISTANCE SHALL BE MEASURED EDGE TO EDGE. IN CASES WHERE IT IS NOT PRACTICAL TO MAINTAIN A 10 FT. SEPARATION, THE WATER MAIN SHALL BE INSTALLED IN A SEPARATE TRENCH OR ON AN UNDISTURBED EARTH SHELF LOCATED ON ONE SIDE OF THE SEWER AND AT AN ELEVATION SO THAT THE BOTTOM OF THE WATER MAIN IS AT LEAST 18 INCHES ABOVE THE TOP OF THE SEWER, AND THE WATER AND SEWER JOINTS SHALL BE STAGGERED. FORCE MAINS SHALL BE INSTALLED AT LEAST 10 FT. HORIZONTALLY FROM ANY EXISTING OR PROPOSED WATER

MINIMUM COVER OVER ALL PIPE SHALL BE 36" TO FINISH GRADE FROM TOP OF PIPE.

COMPLETE "AS—BUILT" INFORMATION RELATIVE TO LOCATION OF ALL VALVES, FITTINGS, MAINS AND SERVICES, SHALL BE ACCURATELY RECORDED ON FIELD DRAWINGS BY THE CONTRACTOR AND SHALL BE SUBMITTED TO THE ENGINEER PRIOR TO FINAL INSPECTION OF WORK.

B. TRENCH DIMENSIONS THE MINIMUM WIDTH OF THE TRENCH SHALL BE EQUAL TO THE OUTSIDE DIAMETER OF THE PIPE AT THE JOINT PLUS EIGHT (8) INCHES FOR UNSHEETED TRENCH, OR TWELVE (12) INCHES FOR SHEETED TRENCH, AND THE MAXIMUM WIDTH OF TRENCH, MEASURED AT THE TOP OF THE PIPE, SHALL NOT EXCEED THE OUTSIDE PIPE DIAMETER PLUS TWO (2) FEET, UNLESS OTHERWISE SHOWN ON DRAWING DETAILS OR APPROVED BY THE APPLICABLE REGULATORY AGENCY AND THE ENGINEER. TRENCH WALLS SHALL BE MAINTAINED VERTICAL FROM THE BOTTOM OF THE TRENCH TO A LINE MEASURED ONE (1) FOOT ABOVE THE TOP OF

THE PIPE. FROM ONE (1) FOOT ABOVE THE TOP OF THE PIPE TO THE SURFACE, THE TRENCH WALLS SHALL BE APPROXIMATELY TRENCH GRADE STANDARD TRENCH GRADE SHALL BE DEFINED AS THE BOTTOM SURFACE OF THE UTILITY TO BE CONSTRUCTED OR PLACED WITHIN THE TRENCH. TRENCH GRADE FOR UTILITIES IN ROCK OR OTHER NON—CUSHIONING MATERIAL, SHALL BE DEFINED AS SIX (6) INCHES BELOW THE OUTSIDE OF THE BOTTOM OF THE UTILITY WHICH SIX (6) INCHES SHALL BE BACKFILLED WITH EXTRA UTILITY BEDDING MATERIAL. EXCAVATION BELOW TRENCH GRADE THAT IS DONE IN ERROR SHALL BE BACKFILLED TO TRENCH GRADE AND COMPACTED.

TRENCH TO A LINE MEASURED ONE (1) FOOT ABOVE THE TOP OF

D. UTILITY BEDDING

CLASS B (MINIMUM UTILITY BEDDING): THE BOTTOM OF THE TRENCH SHALL BE SHAPED TO PROVIDE A FIRM BEDDING FOR THE UTILITY PIPE. THE UTILITY SHALL BE FIRMLY BEDDED IN UNDISTURBED FIRM SOIL, OR HAND—SHAPED UNYIELDING MATERIAL. THE BEDDING SHALL BE SHAPED SO THAT THE PIPE WILL BE IN CONTINUOUS CONTACT THEREWITH FOR ITS FULL LENGTH AND SHALL PROVIDE A MINIMUM BOTTOM SEGMENT SUPPORT FOR THE PIPE EQUAL TO 0.6 OF THE OUTSIDE DIAMETER OF THE BARREL.

CLASS A (SPECIAL UTILITY BEDDING): SHOULD SPECIAL BEDDING BE REQUIRED, DUE TO DEPTH OF COVER, IMPACT LOADINGS, OR OTHER CONDITIONS, "CLASS A" BEDDING SHALL BE INSTALLED, CONSISTING OF SAND OR SUITABLE CRUSHED ROCK. "CLASS A" BEDDING SHALL RECEIVE PRIOR APPROVAL BY THE ENGINEER OR REGULATORY

UNSUITABLE MATERIAL BELOW TRENCH GRADE SOIL UNSUITABLE FOR A PROPER FOUNDATION ENCOUNTERED AT OR BELOW TRENCH GRADE, SUCH AS MUCK OR OTHER DELETERIOUS MATERIAL, SHALL BE REMOVED FOR THE FULL WIDTH OF THE TRENCH AND TO THE DEPTH REQUIRED TO REACH SUITABLE FOUNDATION MATERIAL, UNLESS SPECIAL DESIGN CONSIDERATIONS RECEIVE PRIOR APPROVAL FROM THE APPLICABLE REGULATORY AGENCY AND ENGINEER. BACKFILLING BELOW TRENCH GRADE SHALL BE IN COMPLIANCE WITH THE APPLICABLE PROVISIONS OF SUB—SECTION N, "BACKFILL", WITH MATERIAL AS SPECIFIED UNDER PARAGRAPHS N (1) AND N (2) OF THAT SECTION. BACKFILL LAYERS SHALL NOT EXCEED SIX (6) INCHES IN BACKFILL LAYERS SHALL NOT EXCEED SIX (6) INCHES IN THICKNESS FOR THE FULL TRENCH WIDTH AND COMPACTION SHALL EQUAL NINETY—EIGHT (98) PERCENT OF MAXIMUM DENSITY, AS DETERMINED BY AASHTO SPECIFICATION T—180. COMPACTION DENSITY TESTS SHALL BE MADE AT ALL SUCH BACKFILL AREAS WITH SPACING NOT TO EXCEED FIFTY (50) FEET APART.

F. EXTRA UTILITY-BEDDING MATERIAL WHEN ROCK OR OTHER NON-CUSHIONING MATERIAL IS ENCOUNTERED AT TRENCH GRADE, EXCAVATION SHALL BE EXTENDED TO SIX (6) INCHES BELOW THE OUTSIDE OF THE BOTTOM OF THE UTILITY, AND A CUSHION OF SAND OR SUITABLE CRUSHED ROCK SHALL BE PROVIDED. UTILITY-BEDDING MATERIAL SHALL BE AS SPECIFIED UNDER PARAGRAPH N (2).

G. SHEETING AND BRACING IN ORDER TO PREVENT DAMAGE TO PROPERTY, INJURY TO PERSONS, EROSION, CAVE—INS, OR EXCESSIVE TRENCH WIDTHS, ADEQUATE SHEETING AND BRACING SHALL BE PROVIDED, AS REQUIRED, AND/OR DIRECTED BY THE APPLICABLE OWNER AND ENGINEER, IN ACCORDANCE WITH ACCEPTED STANDARD PRACTICE. SHEETING SHALL BE REMOVED WHEN THE TRENCH HAS BEEN BACKFILLED TO AT LEAST ONE—HALF (1/2) ITS DEPTH, OR WHEN REMOVAL WOULD NOT ENDANGER THE CONSTRUCTION OF ADJACENT STRUCTURES. WHEN REQUIRED, TO ELIMINATE EXCESSIVE TRENCH WIDTH OR OTHER DAMAGE, SHEETING, BRACING OR SHORING SHALL BE LEFT IN PLACE AND THE TOP CUT OFF AT AN ELEVATION OF 2.5 FEET BELOW FINISHED GRADE, UNLESS OTHERWISE DIRECTED. EXCAVATED MATERIAL

EXCAVATED MATERIAL TO BE USED FOR BACKFILL SHALL BE NEATLY DEPOSITED AT THE SIDES OF THE TRENCHES WHERE SPACE IS AVAILABLE. WHERE STOCKPILING OF EXCAVATED MATERIAL IS REQUIRED, THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING THE SITES TO BE USED AND SHALL MAINTAIN HIS OPERATIONS TO PROVIDE FOR NATURAL DRAINAGE AND NOT PRESENT AN UNSIGHT Y APPEARANCE. PRESENT AN UNSIGHTLY APPEARANCE.

MATERIAL DISPOSAL

EXCESS, UNSUITABLE, OR CLEARED AND GRUBBED MATERIAL, RESULTING FROM THE UTILITY INSTALLATION, SHALL BE IMMEDIATELY REMOVED FROM THE WORK SITE AND DISPOSED OF AT LOCATION(S) APPROVED BY THE OWNER AND ENGINEER. EXCESS EXCAVATED MATERIAL SHALL BE SPREAD ON THE DISPOSAL SITE AND GRADED IN A MANNER TO DRAIN PROPERLY AND NOT DISTURB EXISTING DRAINAGE CONDITIONS, AS APPROVED BY THE ENGINEER. DISPOSAL OF CLEARED AND GRUBBED MATERIALS SHALL COMPLY WITH CITY AND/OR COUNTY REQUIREMENTS AS TO BURNING OR DEPOSIT AT DESIGNATED LANDELL SITE(S) DEPOSIT AT DESIGNATED LANDFILL SITE(S).

SHOULD THERE BE INSUFFICIENT SATISFACTORY MATERIAL FROM THE EXCAVATIONS TO MEET THE REQUIREMENTS FOR FILL MATERIAL, BORROW SHALL BE OBTAINED FROM PITS SECURED BY THE CONTRACTOR AND APPROVED BY THE OWNER AND THE ENCINEER

ROCK EXCAVATION

ROCK EXCAVATION SHALL BE DEFINED AS EXCAVATION OF ANY HARD NATURAL SUBSTANCE WHICH REQUIRES THE USE OF EXPLOSIVES AND/OR SPECIAL IMPACT TOOLS SUCH AS JACK HAMMERS, SLEDGES, CHISELS OR SIMILAR DEVICES SPECIFICALLY DESIGNED FOR USE IN CUTTING OR BREAKING ROCK, BUT EXCLUSIVE OF TRENCH EXCAVATING MACHINERY.

DEWATERING

DEWATERING

UTILITIES SHALL BE LAID "IN THE DRY", UNLESS OTHERWISE APPROVED. TRENCH EXCAVATIONS MAY BE DEWATERED BY USING ONE OR MORE OF THE FOLLOWING METHODS: WELL POINT SYSTEM; SUMPS WITH PUMPS; OR OTHER METHOD(S) AS APPROVED BY THE OWNER AND ENGINEER. DEWATERING SYSTEMS SHALL BE UTILIZED IN ACCORDANCE WITH GOOD STANDARD PRACTICE AND MUST BE EFFICIENT ENOUGH TO LOWER THE WATER LEVEL IN ADVANCE OF THE EXCAVATION AND MAINTAIN IT CONTINUOUSLY TO KEEP THE TRENCH BOTTOM AND SIDES FIRM AND DRY. IF THE MATERIAL ENCOUNTERED AT TRENCH GRADE IS SUITABLE FOR THE PASSAGE OF WATER WITHOUT DESTROYING THE SIDES OR UTILITY FOUNDATION OF THE TRENCH, SUMPS MAY BE PROVIDED AT INTERVALS AT THE SIDE OF THE MAIN TRENCH EXCAVATION, WITH PUMPS USED TO LOWER THE WATER LEVEL BY TAKING THEIR SUCTION FROM SAID PUMPS. DISCHARGE FROM DEWATERING SHALL BE DISPOSED OF IN SUCH A MANNER THAT IT WILL NOT INTERFERE WITH THE NORMAL DRAINAGE OF THE AREA IN WHICH THE WORK IS BEING PERFORMED, CREATE A PUBLIC NUISANCE, OR FORM PONDING.

THE OPERATIONS SHALL NOT CAUSE INJURY TO ANY PORTION OF THE WORK COMPLETED, OR IN PROGRESS, OR TO THE SURFACE OF STREETS, OR TO PRIVATE PROPERTY. THE PROPOSED OF SIREEIS, OR TO PRIVATE PROPERTY. THE PROPOSED DEWATERING METHOD(S) AND SCHEDULE SHALL BE COORDINATED WITH, AND APPROVED BY, THE OWNER AND THE ENGINEER AND OTHER NECESSARY REGULATORY AGENCIES PRIOR TO CONSTRUCTION. ADDITIONALLY, WHERE PRIVATE PROPERTY WILL BE INVOLVED, ADVANCE PERMISSION SHALL BE OBTAINED BY THE CONTRACTOR.

OBSTRUCTIONS

IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ACQUAINT HIMSELF WITH ALL EXISTING CONDITIONS AND TO LOCATE ALL STRUCTURES AND UTILITIES ALONG THE PROPOSED UTILITY ALIGNMENT IN ORDER TO AVOID CONFLICTS. WHERE ACTUAL CONFLICTS ARE UNAVOIDABLE, WORK SHALL BE COORDINATED WITH THE FACILITY OWNER AND PERFORMED SO AS TO CAUSE AS LITTLE INTERFERENCE AS POSSIBLE WITH THE SERVICE RENDERED BY THE FACILITY DISTURBED. FACILITIES OR STRUCTURES DAMAGED IN THE PROSECUTION OF THE WORK SHALL BE REPAIRED AND/OR REPLACED IMMEDIATELY, IN CONFORMANCE WITH CURRENT STANDARD PRACTICES OF THE INDUSTRY, OR ACCORDING TO THE DIRECTION OF THE OWNER OF SUCH FACILITY, AT THE CONTRACTOR'S EXPENSE.

BACKFILL

(1) GENERAL

BACKFILL MATERIAL SHALL BE CLEAN EARTH FILL COMPOSED OF SAND, CLAY AND SAND, SAND AND ROCK, CRUSHED ROCK, OR AN APPROVED COMBINATION THEREOF. CRUSHED ROCK, OR AN APPROVED COMBINATION THEREOF. BACKFILLING SHALL BE ACCOMPLISHED UNDER TWO (2) SPECIFIED REQUIREMENTS: FIRST LIFT, FROM TRENCH GRADE TO A POINT TWELVE (12) INCHES ABOVE THE TOP OF THE UTILITY; AND, SECOND LIFT, FROM THE TOP OFF THE FIRST LIFT TO THE GROUND SURFACE. WHERE THRUST BLOCKS, ENCASEMENTS, OR OTHER BELOW GRADE CONCRETE WORK HAVE BEEN INSTALLED, BACKFILLING SHALL NOT PROCEED UNTIL THE CONCRETE HAS OBTAINED SUFFICIENT STRENGTH TO SUPPORT THE BACKFILL LOAD.

(2) FIRST LIFT

FINE MATERIAL SHALL BE CAREFULLY PLACED AND TAMPED AROUND THE LOWER HALF OF THE UTILITY. BACKFILLING SHALL BE CAREFULLY CONTINUED IN LAYERS NOT EXCEEDING SIX (6) INCHES IN THICKNESS FOR THE FULL TRENCH WIDTH, UNTIL THE FILL IS TWELVE (12) INCHES ABOVE THE TOP OF THE UTILITY, USING THE BEST AVAILABLE MATERIAL FROM THE EXCAVATION, IF APPROVED. THE MATERIAL FOR THESE FIRST LAYERS OF APPROVED. THE MATERIAL FOR THESE FIRST LAYERS OF BACKFILL SHALL BE LOWERED TO WITHIN TWO (2) FEET ABOVE THE TOP OF PIPES BEFORE IT IS ALLOWED TO FALL UNLESS THE MATERIAL IS PLACED WITH APPROVED DEVICES THAT PROTECT THE PIPES FROM IMPACT. THE "FIRST LIFT" SHALL BE THOROUGHLY COMPACTED AND COMPLETED BEFORE THE "SECOND LIFT" IS PLACED. COMPACTION SHALL EQUAL NINETY—EIGHT (98) PERCENT OF MAXIMUM DENSITY, AS DETERMINED BY AASTHO SPECIFICATION THE "SECOND LIFT" SPECIFICATION T-180 (ASTM D-1557). THE "FIRST LIFT" BACKFILL SHALL EXCLUDE STONES, OR ROCK FRAGMENTS LARGER THAN THE FOLLOWING: FRAGMENT SIZE
(GREATEST DIMENSION — INCHES) PIPE SIZE

CONCRETE
STEEL
CAST IRON
DUCTILE IRON
CORRUGATED METAL
VITRIFIED CLAY
PLASTIC (PVC, ABS, ETC.) 1-1/2 3/4

SECOND LIFT

THE REMAINDER OF THE TRENCH, ABOVE THE "FIRST SHALL BE BACKFILLED IN LAYERS NOT EXCEEDING NINE (9) INCHES. THE MAXIMUM DIMENSION OF A STONE, ROCK OR PAVEMENT FRAGMENT SHALL BE SIX (6) INCHES. WHEN TRENCHES ARE CUT IN PAVEMENTS OR AREAS TO BE PAVED, COMPACTION, AS DETERMINED BY AASHTO SPECIFICATION T-180 (ASTM D-1557), SHALL BE ACCOMPLISHED TO NOT LESS THAN NINETY-EIGHT (98) PERCENT OF MAXIMUM DENSITY, WITH COMPACTION IN OTHER AREAS NOT LESS THAN NINETY (90) PERCENT MAXIMUM DENSITY.

(4) COMPACTION METHODS THE ABOVE SPECIFIED COMPACTION SHALL BE ACCOMPLISHED

USING ACCEPTED STANDARD METHODS (POWERED TAMPERS, VIBRATORS, ETC.), WITH THE EXCEPTION THAT THE FIRST TWO (2) FEET OF BACKFILLING OVER THE PIPE SHALL BE COMPACTED BY HAND—OPERATED TAMPING DEVICES. FLOODING OR PUDDLING WITH WATER TO CONSOLIDATE BACKFILL IS NOT ACCEPTABLE, EXCEPT WHERE SAND IS ENCOUNTERED AND THE OPERATION HAS BEEN APPROVED BY THE OWNER AND THE ENGINEER.

(5) TESTING

DENSITY TESTS FOR DETERMINATION OF THE ABOVE SPECIFIED COMPACTION SHALL BE MADE BY A TESTING LABORATORY APPROVED BY THE OWNER AND AT THE EXPENSE OF THE CONTRACTOR. TEST LOCATIONS WILL BE DETERMINED BY THE APPLICABLE REGULATORY AGENCY AND THE ENGINEER, BUT IN ANY CASE, SHALL BE SPACED NOT MORE THAN 300 FEET APART WHERE THE TRENCH CUT IS CONTINUOUS IN PAVEMENTS OR AREAS TO BE PAVED. TESTS SHALL ALSO BE MADE WHERE A TRENCH CROSSES A PAVED ROADWAY OR FUTURE PAVED ROADWAY.

IF ANY TEST RESULTS ARE UNSATISFACTORY, THE CONTRACTOR SHALL RE—EXCAVATE AND RE—COMPACT THE BACKFILL AT HIS EXPENSE UNTIL THE DESIRED COMPACTION IS OBTAINED. ADDITIONAL COMPACTION TESTS SHALL BE MADE TO EACH SIDE OF AN UNSATISFACTORY TEST, AS DIRECTED, TO DETERMINE THE EXTENT OF RE—EXCAVATION AND RE—COMPACTION NECESSARY.

PROTECTIVE CONCRETE SLAB

PROTECTIVE CONCRETE SLABS SHALL BE INSTALLED OVER THE TOP OF TRENCHES, WHERE REQUIRED ON THE PLANS AND DETAILED THEREON, TO PROTECT THE INSTALLED UTILITY AGAINST EXCESSIVE LOADS, OR WHERE INSUFFICIENT COVER EXISTS.

SIDEWALK AND DRIVEWAY RESTORATION EXISTING SIDEWALKS AND DRIVEWAYS REMOVED, DISTURBED OR DESTROYED BY CONSTRUCTION, SHALL BE REPLACED OR REPAIRED. THE FINISHED WORK SHALL BE EQUAL IN ALL RESPECTS TO THE ORIGINAL AND SHALL BE APPROVED BY THE APPLICABLE REGULATORY AGENCY AND THE ENGINEER.

ROADWAY AND PAVEMENT RESTORATION

(1) GENERAL PAVEMENT OR ROADWAY SURFACES CUT OR DAMAGES SHALL BE REPLACED BY THE CONTRACTOR IN EQUAL OR BETTER CONDITION THAN THE ORIGINAL, INCLUDING STABILIZATION, BASE COURSE, SURFACE COURSE, CURB AND GUTTER, OR OTHER APPURTENANCES. THE CONTRACTOR SHALL PROVIDE ADVANCE NOTICE TO THE APPROPRIATE AUTHORITY, AS REQUIRED, PRIOR TO CONSTRUCTION OPERATIONS.

(2) ROADWAY RESTORATION

RESTORATION SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS SET FORTH IN THESE STANDARDS. THE MATERIALS OF CONSTRUCTION AND METHOD OF INSTALLATION, ALONG WITH THE PROPOSED RESTORATION DESIGN FOR ITEMS NOT REFERRED OR SPECIFIED HEREIN, SHALL RECEIVE PRIOR APPROVAL FROM THE REGULATORY AGENCY AND THE ENGINEER.

WHERE EXISTING PAVEMENT IS TO BE REMOVED, THE SURFACING SHALL BE MECHANICALLY SAW CUT PRIOR TO TRENCH EXCAVATION LEAVING A UNIFORM AND STRAIGHT EDGE, WITH MINIMUM DISTURBANCE TO THE REMAINING ADJACENT SURFACING. THE WIDTH OF CUT FOR THIS PHASE OF EXISTING PAVEMENT BEMOVAL SHALL BE MINIMAL AND PAPALLEL REMOVAL SHALL BE MINIMAL AND PARALLEL

IMMEDIATELY FOLLOWING THE SPECIFIED BACKFILLING AND COMPACTION, A TEMPORARY SAND SEAL COAT SURFACE SHALL BE APPLIED TO THE CUT AREAS. THIS TEMPORARY SURFACING SHALL PROVIDE A SMOOTH TRAFFIC SURFACE WITH THE EXISTING ROADWAY AND SHALL BE MAINTAINED UNTIL FINAL RESTORATION. SAID SURFACING SHALL REMAIN FOR TEN (10) DAYS IN ORDER TO ASSURE THE STABILITY OF THE BACKFILL UNDER NORMAL TRAFFIC CONDITIONS. FOLLOWING THIS PERIOD AND PRIOR TO FIFTEEN (15) DAYS AFTER APPLICATION, THE TEMPORARY SURFACING SHALL BE REMOVED AND FINAL ROADWAY SURFACE RESTORATION ACCOMPLISHED.

IN ADVANCE OF FINAL RESTORATION, THE TEMPORARY SURFACING SHALL BE REMOVED AND THE EXISTING PAVEMENT MECHANICALLY SAWED STRAIGHT AND CLEAN TO THE STIPULATED DIMENSIONS. FOLLOWING THE ABOVE OPERATION, THE CONTRACTOR SHALL PROCEED IMMEDIATELY WITH FINAL PAVEMENT RESTORATION IN ACCORDANCE WITH THESE STANDARDS.

ROADWAY RESTORATION (OTHER LOCATIONS) WORK WITHIN THE RIGHTS-OF-WAY OF PUBLIC THOROUGH FARES SHALL CONFORM TO THE REQUIREMENTS OF THE GOVERNMENTAL AGENCY HAVING JURISDICTION AND THE ENGINEER.

PROTECTION AND RESTORATION OF PROPERTY

PROTECTION AND RESTORATION OF PROPERTY

DURING THE COURSE OF CONSTRUCTION, THE CONTRACTOR SHALL TAKE SPECIAL CARE AND PROVIDE ADEQUATE PROTECTION IN ORDER TO MINIMIZE DAMAGE TO VEGETATION, SURFACED AREAS AND STRUCTURES WITHIN THE CONSTRUCTION RIGHT—OF—WAY, EASEMENT OR SITE, AND TAKE FULL RESPONSIBILITY FOR THE REPLACEMENT OR REPAIR THEREOF. THE CONTRACTOR SHALL IMMEDIATELY REPAIR ANY DAMAGE TO PRIVATE PROPERTY CREATED BY ENCROACHMENT THEREON. SHOULD THE REMOVAL OR TRIMMING OF VALUABLE TREES, SHRUBS OR GRASS BE REQUIRED TO FACILITATE THE INSTALLATION WITHIN THE DESIGNATED CONSTRUCTION AREA, THIS WORK SHALL BE DONE IN COOPERATION WITH THE REGULATORY AGENCY AND THE ENGINEER AND/OR AUTHORITY FROM THE LOCAL COMMUNITY IN WHICH THE WORK TAKES PLACE. SAID VALUABLE VEGETATION, REMOVED OR DAMAGED, SHALL BE REPLANTED, IF POSSIBLE, OR REPLACED BY ITEMS OF EQUAL QUALITY, AND MAINTAINED UNTIL GROWTH IS RE—ESTABLISHED. TOP SOIL DAMAGED IN THE COURSE OF WORK SHALL BE REPLACED WITH AT LEAST A FOUR (4) INCH LAYER OF SUITABLE MATERIAL. FOLLOWING CONSTRUCTION COMPLETION, THE WORK AREA ALONG THE ROUTE OF THE INSTALLATION SHALL BE FINISH GRADED TO ELEVATIONS COMPATIBLE WITH THE ADJACENT SURFACE, WITH GRASSING OR HAND RAKING REQUIRED WITHIN DEVELOPED AREAS. DEVELOPED AREAS.

CLEAN-UP

WORK SITE CLEAN-UP AND PROPERTY RESTORATION SHALL FOLLOW BEHIND CONSTRUCTION OPERATIONS WITHOUT DELAY. IN ORDER TO FACILITATE AN ACCEPTABLE CONSTRUCTION SITE, DEBRIS AND WASTE MATERIALS SHALL BE REMOVED FROM THE SITE IMMEDIATELY, AND DAILY TRENCHING LENGTH VERSUS PIPE LAYING SHALL BE COORDINATED TO PROVIDE THE MINIMUM OVERNIGHT TRENCH OPENING. CONSTRUCTION SITE MAINTENANCE, ALONG WITH ON-GOING CLEAN-UP AND FINAL PROPERTY RESTORATION ACCEPTANCE, SHALL BE AS DIRECTED AND APPROVED BY THE REGULATORY AGENCY AND THE ENGINEER.

ALL CONSTRUCTION COVERED BY THESE PLANS SHALL COMPLY WITH THE MATERIAL REQUIREMENTS AND QUALITY CONTROL STANDARDS CONTAINED IN THE SUMTER COUNTY LAND DEVELOPMENT CODE.

KEN FRINK, P.E. REG. ENGINEER NO. 47750 STATE OF FLORIDA

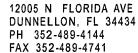
BURRELL ENGINEERING, INC. CIVIL ENGINEERING CA No. 7973

Revision:	BY:	Date:	Drawn by:
			DFS
			Scale
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DATE _____ Work Order 900852

Drawing # CO- 02 - 110

12005 N. FLORIDA AVE DUNNELLON, FL 34434 PH. 352-489-4144 FAX 352-489-4741 BEI JOB NO. 09-53, FILE NO. K-10, DRAWING NO. Base 09-53, LAYOUT





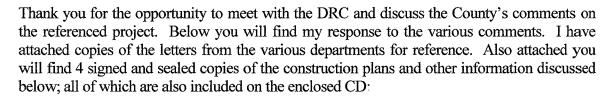
July 15, 2010

Aimee Webb Sumter County Board of County Commissioners 910 North Main Street, Suite 301 Bushnell, FL 33513

Subject: SECO Continental Substation

Project # 09-53





Division of Planning and Development

- 1 Please see updated sheet 105 which has the property dimensions added.
- 2. Please see the revised Site Data table on sheet 105 which has the future land use added.
- 3. I reviewed the original project submittal which included a signed and sealed landscape plan with the requested buffer detail (It is also on the CD I sent). I did add a note to the construction plans making reference to the landscape plans for the planting of the buffers.
- 4. As discussed at the TRC meeting, the survey shown in the construction plans is for reference only, the June 16, 2010 submittal included a stand alone 11 x 17 signed and sealed copy of the survey
- 5. As discussed in the TRC I have attached an exhibit which shows the existing site improvements.
- 6. Please see the updated sheet 105 which has the corrected setbacks shown.

County Engineer

- 1 Please see the updated sheet 104 with the corrections made.
- 2. The callout on sheet 105 to remove the western drives, now includes the eastern drive and pipe.
- 3. A submittal has already been made to Public Works for the access to CR 143 and should have already been issued. As of now, we have not received a copy.



• Page 2 July 15, 2010

4. FDOT has issued an exemption from drainage permitting and an intent to issue an access permit. Copies of which are attached. Please note that the FDOT access permit is contingent upon FDOT receiving confirmation that the local governmental authority (Sumter County) has approved the plans, as such we request that the Notice of Intent be sufficient for your review

- 5. A stop bar has been added to the CR 143 driveway as requested.
- 6. The driveway on to CR 143 has been revised to include 35' radius returns.
- 7 The requested detail can be found within section A-A on sheet 105. A note has been added to sheet 106 clarifying this.
- 8. As discussed in the TRC meeting, our experience has been that the turn down elbows actually encourage clogging and a strainer basket is more efficient and has been added to sheet 107.
- 9 The weir width has now been added to sheet 107 of the plans.
- 10. As discussed in the TRC meeting, the DRA is adjacent to a wetland which is conducive to the natural establishment of native vegetation. As such, no plantings (other than sod on the side slopes) are proposed in the DRA bottom. Out of an abundance of caution, I discussed this with the landscape architect on the project and he agrees with that approach.
- 11 A copy of the FDEP completeness letter as well as a no permit required letter from the ACOE was included in our original submittal. Per the operating agreement between SWFWMD and FDEP, SWFWMD relinquished permitting authority to FDEP for electrical substations, so a permit will not be necessary from that agency.

I trust the above application is now complete but should you have any questions or need additional information please do not he sitate to give me a call.

Sincerely,

Burrell Engineering, Inc.

I my

Ken Frink, P.E. Project Manager Vice President

cc: Lester Sumner, SECO